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Appendix A

National Environmental Policy Act and California Environmental Quality Act Supporting Documentation

September 2015
(revised December 2015)

Appendix A1

Public Comments Received at Scoping Meeting on January 25, 2006

Public Scoping Meeting Summary (January 25, 2006)

Pursuant to the National Environmental Policy Act (NEPA) (40 C.F.R. §1506.6(c)) and the California Environmental Policy Act (CEQA) (14 C.C.R. §21083.9), the project sponsors, the United States Army Corps of Engineers (USACE), California Coastal Conservancy (CCC), and the Santa Clara Valley Water District (SCVWD) held a public scoping meeting on January 25, 2006, from 5:30 to 8:30 P.M., at the Milpitas Community Center, City of Milpitas, California. The meeting, which provided an overview of the Shoreline Study, the NEPA/CEQA process, and an explanation of the relationship between the Shoreline Study and the South Bay Salt Pond Restoration Project, was attended by 36 people.

Opening remarks were provided by the project sponsors, brief presentations were given, and a question and answer period was provided following the presentations. The table below provides a summary of the questions, comments, and responses to the project sponsor's various presentations, and to the the formal comments provided in writing at the scoping meeting, by mail, or via the project website. Where applicable, the commenter's name and organization was provided. Not all questions and comments were responded to. The official comment period ended on February 6, 2006.

Table 1. Summary of Formal Comments

Name	Organization	Summary of Question/Comment	Summary of Response
Subject: Timeline			
Not provided	NA	• If the timeline is not met, who is responsible?	**Facilitator:** • The schedule is expedited as well as the number of people working on it. **USFWS:** • We take full responsibility.
Subject: Salt Pond Study, Shoreline Study, and Other Projects			
Not Provided	NA	• Is the Shoreline Study going to examine the percentage of work complete as the Salt Pond Study progresses?	**CCC:** • We will evaluate the cost/benefit of habitat units with the Salt Pond Study. We will have to plan the Salt Pond Study showing the potential landscape

			study and have these integrated into the flood control elements. • The best Federal investment in the Shoreline Study may not be the 'locally preferred project'; we're trying to get them as close together as possible. If the two project alternatives do not agree, we may either 1) end up with a different vision of the landscape or 2) end up with less Federal money.
Not Provided	NA	• How are the Salt Pond and Shoreline Studies integrate with the USACE's San Francisquito Creek Project	**USACE:** • The USACE is utilizing the same lead planner on both projects.
Not provided	NA	• Timing of the Salt Pond and Shoreline Studies will not match up.	**USACE:** • The projects have to incorporate each other into their respective analysis. If the Shoreline Study comes up with a recommended and authorized plan, then the San Francisquito Creek Study develops a plan, and we don't participate in the project by then, this will be incorporated into our cost/benefit ratio of San

			Francisquito Creek and potentially alter the optimal solution. We would then have concrete designs with the Shoreline Study, until then, we are using assumptions and the final design might change. **CCC:** • We also need to consider the Sacrament Levees and the various bills in the legislature (achieve 100 and 200-year level of flood protection and establish a state goal for levels of flooding). The state promises to pay back to local areas for flood protection…there could be substantial support from Sacramento that may benefit our community.
Paula Bettencourt	City of Mountain View	• City of Mountain View is interested in impacts of these projects on Charleston Slough and Steven's Creek Tidal Marsh, as restoration projects are going on in the area.	No response.
Dan Bruinsma		• The City of San Jose is preparing a master planning effort on the [water] plant property;	**SCVWD:** • Provide a timeline when you need this information.

		how do we coordinate the various projects with this effort; involving flood control and habitat issues, as well as others?	**Facilitator:** - We are trying to identify what these projects are by February 6, 2006. Please provide what the project is, who the contact is, project location within the shoreline study footprint, and a timeline.
Robert Shaver	Engineering Manager	- Notify Alameda County Water District for Alameda County Work and well abandonment.	No Response
Glen S. Roberts	Public Works Director, City of Palo Alto	- Ensure the San Francisquito Creek and Shoreline Studies are well coordinated.	No Response.
Subject: Potential Impacts and EIR/EIS Considerations			
John Stuffle Bean	Director, City of San Jose, Environmental Services	- City concerned with economic impacts associated with potential flooding of waste water treatment plants in the Silicon Valley (costs of downtime, environmental damage, etc.). - Suggests clarifying points on: site specific design (A18), riparian corridors, upland habitats, uses of recycled waste water, infrastructure associated with public access, and extension of the study area to the 200-year flood.	No Response.
Eileen McLaughlin		- Consider sensitive species in 100-year floodplain and upland	No Response.

		species in the floodplain (e.g., burrowing owl). • Consider flooding impacts on landfills.	
Libby Lucas	CNPS	• Consider anadromous fisheries and impacts to food sources for birds.	No Response.
Paula Bettencourt	City of Mountain View	• Flood impacts to Mountain View and North Bayshore area.	No Response.
Major Jeff Waldman (two formal submission)	Air Force Moffitt Field	• Consider potential increased risk of bird strikes by air crafts in the vicinity of Moffitt Field • Manage two-mile radius area around airfield to reflect the goals of the project.	No Response.
Anthony Novak	USDA Wildlife Services	• Consider potential increased risk of bird strikes by air crafts in the vicinity of Moffitt Field. • Minimize attractiveness of to waterfowl within a two-mile radius of airfield (full conversion to tidal marsh, make open water deeper, prevent the inclusion of internal islands).	No Response.
Subject: Flooding			
Glen S. Roberts	Public Works Director, City of Palo Alto	• City of Palo Alto Flooding. • The City of Palo Alto would like to maintain capacity of the Palo Alto Flood Basin, located within the study area.	No Response.
Laura Thompson	Non-Profit	• Consider public access improvements to the Bay Trail.	No Response.
Joe Teresi	City of Palo	• Priority is to take	**USACE:**

	Alto	businesses and residents out of the FEMA floodplain; will the preferred alternative include this?	- We have to identify the most cost-effective plan, as such, it is a possibility. - In order to remove businesses and residents from the FEMA floodplain, there has to be at least a 100-year floodplain; the local community has to pay the difference if not.
Joe Teresi	City of Palo Alto	- Is FEMA reassessing the tidal flood elevations? If so, what is the status?	**USACE:** - The USACE and FEMA have been working closely [on this issue]; we are coordinating our methods with theirs.
Not Provided	NA	- What specific floods are being analyzed in terms of years?	**SCVWD:** - San Jose, Palo Alto, Sunnyvale, etc.; it is something we need to discuss further.
Joe Teresi	City of Palo Alto	- If a levee is improved in the area of the Palo Alto Flood Basin, it would make more sense to improve the outer levee, rather than the inner, in order to retain the volume needed to contain runoff.	**Facilitator:** - Please put that in a letter.
Subject: Permits			
Dwight Sanders	Chief, State Lands Commission	- Encroachment onto State Lands – permit requirements.	**CCC:** - No permits required for study.
Subject: Cost and Cost Effectiveness			
Not Provided	NA	- If the [USACE's] most cost effective project would result in not	**SCVWD:** - Whatever the alternative is, it will

		removing businesses and residents from the 100-year flood plain, would the flood district increase funding to make that happen?	be expensive; we need to determine a strategy for funding (grants, federal funds, state funds, etc.). The Clean Safe Creeks program uses Santa Clara County taxes for flood protection and we are looking into a Clean Safe Creeks II. Financing is a big issue.
Not Provided	NA	- If a 100-year plan is too expensive, what process will determine the most cost-effective project?	**USACE:** - Benefit-to-cost ratios. We figure out the approximate cost of each alternative and weigh the cost against the projected benefits (flood damage reduction). Then we figure out what alternative has the biggest benefit with the least costs and pick that plan. Several issues will be analyzed. **CCC:** - Getting businesses and residents out of the floodplain is an objective; we want to make sure we include the right FEMA people and make sure the standards and models are correct.
Dan Bruinsma		- Capture the costs of	**USACE:**

		including specific areas [San Jose, Palo Alto, Sunnyvale, etc.] in the study.	• It would take an event like a 200-year flood to do that kind of damage and these types of flooding events occur very infrequently. This may not have a big impact on the cost-benefit analysis. **CCC:** • Please provide any information regarding major impacts to the community [resulting from these projects].
Dan Bruinsma		• Does the study look at the cost to the community if the waste water treatment plant goes under or if industry is shut down and people cannot work?	**USACE:** • Economic impacts associated with flooding will be examined at the appropriate level of detail.

Appendix A2

Shoreline Notice of Preparation Comment Letters (2006 and 2014)

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 4
P.O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-6053
FAX (510) 286-5559
TTY 711
www.dot.ca.gov

Serious Drought.
Help save water!

October 2, 2014

SCL237207
SCL/237/PM 8.0
SCH# 2006012020

Mr. Michael Martin
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Dear Mr. Martin:

South San Francisco Bay Shoreline Phase I Study – Notice of Preparation (NOP)

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the project referenced above. We have reviewed the NOP and have the following comments to offer.

Construction Traffic Impact Study (TIS)
One of Caltrans' ongoing responsibilities is to collaborate with local agencies to avoid, eliminate, or reduce to insignificance potential adverse impacts by local development on State highways. We recommend using the Caltrans *Guide for the Preparation of Traffic Impact Studies* (TIS Guide) for determining which scenarios and methodologies to use in the analysis. The TIS Guide is a starting point for collaboration between the lead agency and Caltrans in determining when a TIS is needed. The appropriate level of study is determined by the particulars of a project, the prevailing highway conditions, and the forecasted construction traffic. The TIS Guide is available at the following website address: http://dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf.

The TIS should include:

1. Vicinity map, regional location map, and a site plan clearly showing project access in relation to nearby State roadways. Ingress and egress for all project components should be clearly identified. The State right-of-way (ROW) should be clearly identified. The maps should also include project driveways and local roads and intersections.

2. Project-related trip generation, distribution, and assignment. The assumptions and methodologies used to develop this information should be detailed in the study, and should be supported with appropriate documentation.

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

3. Average Daily Traffic, AM and PM peak hour volumes and levels of service (LOS) on all roadways where potentially significant impacts may occur, including crossroads and controlled intersections. The analysis should clearly identify the project's contribution to area traffic and any degradation to existing and cumulative LOS. Caltrans' LOS threshold, which is the transition between LOS C and D, and is explained in detail in the TIS Guide, should be applied to all State facilities.

4. Schematic illustration of traffic conditions including the project site and study area roadways, trip distribution percentages and volumes as well as intersection geometrics (i.e., lane configurations) for the scenarios described above.

Lead Agency

As the lead agency, Santa Clara Valley Water District (SCVWD) is responsible for all project mitigation, including any needed improvements to State highways. The project's financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures. This information should also be presented in the Mitigation Monitoring and Reporting Plan of the environmental document.

Transportation Management Plan

If it is determined that traffic restrictions and detours are needed on or affecting State highways, a Transportation Management Plan (TMP) or construction TIS may be required of the developer for approval by Caltrans prior to construction. TMPs must be prepared in accordance with California *Manual on Uniform Traffic Control Devices.* Further information is available for download at the following web address:
http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/pdf/camutcd2012/Part6.pdf.

Please ensure that such plans are also prepared in accordance with the transportation management plan requirements of the corresponding jurisdictions. For further TMP assistance, please contact the Office of Traffic Management Plans at (510) 286-4647.

Transportation Permit

Project work that requires movement of oversized or excessive load vehicles on State roadways requires a transportation permit that is issued by Caltrans. To apply, a completed transportation permit application with the determined specific route(s) for the shipper to follow from origin to destination must be submitted to: Caltrans Transportation Permits Office, 1823 14th Street, Sacramento, CA 95811-7119. See the following website for more information: http://www.dot.ca.gov/hq/traffops/permits.

Cultural Resources

Caltrans requires that a project's environmental document include documentation of a current archaeological record search from the Northwest Information Center of the California Historical Resources Information System if construction activities are proposed within State ROW. Current record searches must be no more than five years old. Caltrans requires the records search, and if warranted, a cultural resource study by a qualified, professional archaeologist, and evidence of Native American consultation to ensure compliance with California Environmental Quality Act

(CEQA), Section 5024.5 and 5097 of the California Public Resources Code, and Volume 2 of Caltrans' Standard Environmental Reference (http://www.dot.ca.gov/ser/vol2/vol2.htm).

These requirements, including applicable mitigation, must be fulfilled before an encroachment permit can be issued for project-related work in State ROW; these requirements also apply to National Environmental Policy Act (NEPA) documents when there is a federal action on a project. Work subject to these requirements includes, but is not limited to: lane widening, channelization, auxiliary lanes, and/or modification of existing features such as slopes, drainage features, curbs, sidewalks and driveways within or adjacent to State ROW.

Bridges, Trestles, Culverts and Other Structures in Riparian Environments

Some project level activities may affect riparian flow patterns upstream of bridges, trestles, culverts or other structures for which Caltrans holds responsibility. Please ensure your project level environmental documents include hydrological studies to determine whether such impacts will occur, and to identify appropriate mitigation measures.

Dike and Levee Maintenance, Repair and Upgrade

Activities involving demolition, reinforcement or rehabilitation of dikes or levees on which transportation facilities are built may potentially affect State transportation facilities. Also, built features on top of dikes and levees may contribute additional engineering considerations related to weight loading or compaction. These factors must be addressed through geotechnical and hydrological studies conducted in coordination with Caltrans at the project level.

Sea Level Rise

The effects of sea level rise may have impacts on transportation facilities located in the project area. Executive Order (EO) S-13-08 directs State agencies planning construction projects in areas vulnerable to sea level rise to begin planning for potential impacts by considering a range of sea level rise scenarios for the years 2050 and 2100. Higher water levels may increase erosion rates, change environmental characteristics that affect material durability, lead to increased groundwater levels and change sediment movement along shores and at estuaries and river mouths, as well as affect soil pore pressure at dikes and levees on which transportation facilities are constructed. All these factors must be addressed through geotechnical and hydrological studies conducted in coordination with Caltrans.

Encroachment Permit

Please be advised that any work or traffic control that encroaches onto the State ROW requires an encroachment permit that is issued by Caltrans. To apply, a completed encroachment permit application, environmental documentation, and five (5) sets of plans clearly indicating State ROW must be submitted to: David Salladay, District Office Chief, Office of Permits, California Department of Transportation, District 4, P.O. Box 23660, Oakland, CA 94623-0660. Traffic-related mitigation measures should be incorporated into the construction plans prior to the encroachment permit process. See this website for more information: http://www.dot.ca.gov/hq/traffops/developserv/permits.

Should you have any questions regarding this letter, please contact Brian Brandert of my staff at (510) 286-5505 or brian.brandert@dot.ca.gov.

Sincerely,

for
ERIK ALM, AICP
District Branch Chief
Local Development - Intergovernmental Review

c: Scott Morgan, State Clearinghouse

CITIZENS COMMITTEE TO COMPLETE THE REFUGE

453 Tennessee Lane, Palo Alto, CA 94306 Tel 650 493-5540 Fax 650 494-7640 www.BayRefuge.org

October 2, 2014 ***Via E-mail***

Michael Martin
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118
michaelmartin@valleywater.org

RE: Revised Notice of Preparation of Draft Environmental Impact Report, South San Francisco Bay Shoreline Phase 1 Study, Clearing House #2006012020.

Dear Mr. Martin:

The Citizens Committee to Complete the Refuge (CCCR) appreciates this opportunity to respond to this Revised Notice of Preparation (RNOP) and to provide comments regarding the Draft Environmental Impact Report (DEIR) for the South San Francisco Bay Shoreline Phase 1 Study (Study).

During the preceding period of public discussion of this project and dating back to 2006, CCCR has commented, contributing information and raising questions pertinent to finding the best outcomes. We continue to do so here.

We understand that this revision will transfer the CEQA responsibility as Lead Agency to the Santa Clara Valley Water District (SCVWD) and will incorporate additional detail about the Alviso ponds and the Santa Clara County Interim Feasibility Study. The Study area extends along the Alviso shoreline between Coyote Creek and Alviso Slough.

Maximize Contiguous Available Wetlands

In June and July of 2012[1] regarding proposed alternatives of the Shoreline Study, CCCR raised concerns that the alternatives being considered at the time failed to maximize the availability of existing wetlands for the benefit of coastal protection and for habitat. We ask that SCVWD ensure that is done during development of alternatives for the DEIR.

A levee alignment that maximizes wetland acreage *outboard* of the levee will provide significant flood management and habitat advantages, advantages that will improve as the South Bay Salt Pond Restoration Project moves forward. The broadened floodplain would allow release of upstream pressure on fluvial flow from the Coyote Creek and Guadalupe Watershed immediately upon entering the Bay even if parts of the existing mud levees remain.

As a combination of impacts, stream channelization, salt pond levees, and the freshwater effluent of the RWF produced salinity changes that replaced lower-growing, channel-edge-hugging halophytes with channel-clogging tule grasses. In the coming decades, restoration actions of the South Bay Salt Pond Restoration Project (SBSPRP) and reductions of the water treatment plant effluent (through increased recycling of treated water) are expected to allow salinity to increase closer to the shoreline, opening channels by reducing brackish marsh conditions and associated masses of tule grass. Currently, the SCVWD mechanically cuts away Alviso

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[1] Public meeting 06/12/14, CCCR Meeting 07/19/12, and informal communications

Slough's tule grass periodically, to open the channel. The frequency, extent and costs for that action can be reduced relative to the increase of available, tidal wetlands that are kept outboard of the levee, providing vegetation changes. This is an opportunity to capture cost-saving, flood protection provided by nature.

Prior public discussions of the proposed levee have placed New Chicago Marsh (both sides of the railroad spur) and wetlands surrounding the Alviso community perimeter inboard of the levee. There are also a number of identified wetlands with muted tidal marsh vegetation in the buffer lands owned by the San Jose-Santa Clara Regional Wastewater Facility (RWF). Repeatedly, salt marsh harvest mice (SMHM) have been found in New Chicago Marsh east of the railroad spur, making it likely that the mice are also present in the contiguous wetlands as well as along the waterway connections to the two major streams. A Super levee that eliminates connections between those wetlands, could permanently isolate the mice and possibly the endangered salt marsh wandering shrew, ultimately narrowing genetic diversity and its associated value for species survival. Putting these wetlands outboard while retaining the levees that currently protect them can provide habitat and make the lands available for inclusion in the broader floodplain in the decades ahead.

Isolated wetlands cannot serve as flood buffer/impact reduction zones during extreme fluvial events and/or extreme high water from the Bay. In contrast, the greater the size of the Bay floodplain that can be made available in future decades, the greater the level of protection that can be provided. The project area is the confluence of two major streams. The Study should be taking that unique condition, the intersection of alluvial fans, as a major indicator of the value of maximizing the floodplain.

We are aware that subsidence has put substantial areas along this shoreline below sea level, meaning that, if directly exposed to the Bay, subsided wetlands would become ponds. It is known also that subsidence does not affect the entire shoreline e.g. land is at or above sea level near Coyote Creek. We observe that inboard placement precludes any sediment deposition from the Bay, suggesting that, over time, the height differential between inboard and outboard lands will increase. As sea level rise moves forward, it appears likely that lowlands inboard will gradually become wetter as groundwater levels rise, losing even the ability to serve as stormwater basins.

Decisions about the levee need to avoid alignment that may obstruct or reduce future options for flood control.

Levee as Trails

During prior public communication about this levee, it became evident that there was insufficient understanding that availability of levee use for bicycle commuting, hiking, wildlife observation and other activities would vary by jurisdictional location. Resulting communication of options and limitations by jurisdiction, particularly of the Don Edwards San Francisco Bay National Wildlife Refuge (Refuge), helped clarify the situation.

The DEIR should clearly state what public uses are likely or possible, clearly setting public expectations and explaining jurisdictional differences.

100-year protection

As the primary purpose of this project is flood protection, no levee alternative should be proposed that would provide less than 100-year protection. Previously one proposed alternative would have been of less height and provided just 25-year protection, apparently to avoid impacting a viewscape from a subsided area. Such a decision is irresponsible regarding the level of flood protection and the future costs associated with emergency response to floods and/or levee improvement.

SCVWD SMHM Mitigation Wetland

For several decades the SCVWD has maintained a mitigation area adjoining the RWF's active biosolid ponds/drying beds and at the eastward terminus of the Coyote Creek flood bypass channel. Unfortunately its location puts the future value to SMHM mitigation there on a declining trajectory.

Except during very high water events on Coyote Creek, water reaching this location comes from the west end of the channel as it connects to the Creek past Newby Island. As such, water is forced into the stream primarily by tidal action. As sea levels rise, and given the diked nature of the channel, the mitigation marsh will eventually be fully below water level, losing all value for SMHM.

Some promising news is that San Jose, through its approval of its Plant Master Plan (see below) may provide substantial opportunity for expanded SMHM habitat that can more than replace the loss of the existing mitigation area.

During planning for the levee terminus at Coyote Creek, the opportunity to create expanded SMHM habitat should be a factor in the decisions.

Protection that cannot be provided by a Shoreline Levee

In the minds and discussion of the general public, it is a common assumption that a shoreline levee will provide all needed protection against sea level rise. It is then important for the DEIR to discuss what protection the levee can and can't provide. The levee cannot protect inboard lands from high waters overtopping due to sea level rise in lower Coyote Creek, Alviso Slough/lower Guadalupe and Artesian Slough. The public and the associated land owners and managers need that explanation.

Plans and/or Operations approved or that have begun operation since 2006:

A number of relevant plans have been approved in the interim since the USACE began the Shoreline Study in 2006. Additionally, new structures and operations have been built, changing some characteristics of the Study area. Those plans and changes need to be considered in SCVWD's DEIR.

Tidal Marsh Recovery Plan of Northern and Coastal California (TMRP), USFWS: Final EIS in 2013. The goal of the TMRP is the comprehensive restoration and management of tidal marsh ecosystems. It is a 50-year recovery plan developed around the biology of five federally-endangered species, two animals and three plants and also addresses 11 species/sub-species of concern. A crucial set of tidal marsh habitats are the sum of the range of each of these species plus the adjacent uplands and ecotones. Those habitats, and potential habitats, were used to identify land surrounding the Bay as having characteristics that are suitable for recovery. *Much and possibly all of the area of the Study is within those recovery zones, making the TMRP a requisite guide to tidal marsh, upland and ecotone impact planning for this project.*

Plant Master Plan Final EIR, San Jose-Santa Clara Regional Wastewater Facility (RWF) and Buffer lands (PMP EIR): Approved in 2013, this 30-year Plan is program-level for the land use of the Plant buffer lands and serves as a project plan for many improvements to the treatment plant. It plans and/or proposes changes inboard and outboard of the previously proposed location of a new shoreline levee. The following is a partial list of issues that may need consideration in the Study.

- Mitigation Clarity: The PMP EIR includes multiple mentions of mitigation dependencies involving the future Shoreline levee, references that often lack detail generally expected in mitigation discussions including the question of with whom the responsibility lies. The Study may need to clarify for the purposes of defining agency responsibility.

• Inactive Biosolids Beds: Certain projects planned are intended to be built on inactive biosolids beds that lie just east of the Zanker Landfill and south of the existing levee. By location, this land should be characterized in the DEIR for purposes of understanding potential impacts of the Study. This area includes existing wetlands. A formal wetland delineation was known to be needed or may have been completed. A portion of this area was identified as SMHM habitat by the US Fish & Wildlife Service (USFWS). That portion is next to the existing levee and potentially could be placed outboard of the new levee. The USFWS[2] also informed San Jose that a survey would need to be performed on the rest of the inactive biosolids beds to determine if there is potential habitat recovery for target species of the TMRP. We do not know if that survey has been performed. Overall, the inactive biosolids beds are known by San Jose to include multiple contaminant locations, a status that needs to be fully analyzed wherever the Study might be proposing levee construction or staging.

• Potential floodplain enhancement: In the final alternative approved to implement the PMP EIR, San Jose made no change to the land use designation of the active biosolids ponds and drying beds that are bordered by Coyote Creek, the flood bypass channel south of Newby Island and pond A18. The PMP EIR proposes to retire these active ponds/beds when and as the new biosolids treatment facilities are constructed and operating. It also proposes restoration of pond A18.

While no specific decision was made on future land use, there was and still is favorable discussion[3] about potential use of these ponds/beds to provide an expanded mouth and floodplain or as flood detention ponds for Coyote Creek. Recent considerations of flood control planning by the San Francisco Bay Regional Water Quality Control Board (RWQCB), have put more emphasis on designs that provide a stream mouth that has the capacity commensurate with maximum flow volume of the watershed. Such design could be expanded channel width and/or floodplain.

While the Study is primarily intended to look at the feasibility of a levee that will protect the Alviso shoreline from the Bay, the termini of the levee could impact stream capacity for the Coyote Creek and Guadalupe River watersheds. The Study should consider the opportunity that may be possible on the San Jose buffer lands and pond A18 and should consult with the RWQCB. *The goal would be to provide a levee design that does not limit future stream flood control options*. That may be critical flood prevention as climate change progresses producing more frequent, extreme storms that may combine with higher seas and king tides that result from sea level rise.

• Outfall into Pond A18: The approved implementation alternative adds a second outfall that would flow into pond A18. At the same time the RWF is planning to substantially reduce its outfall volume (see the next section). Is a second outfall necessary? As an outfall can create a locations of weakness in flood protection by a levee, the inclusion of a new outfall should be reviewed thoroughly and discussed in the DEIR.

The DEIR should review the PMP EIR and its approved implementation alternative as other overlaps between the two projects may occur.

Silicon Valley Advanced Water Purification Center (AWPC), of the SCVWD: Operational in 2014, this facility is located to the east of Zanker Road across from the RWF and is operated in partnership with San Jose. The Center is not located near the likely placement of the levee but its operation may introduce changes to Alviso wetlands. The facility was built to provide a much improved level of water purification of treated wastewater for recycling and reuse. Using water that has completed treatment at the RWF, the facility adds treatment with microfiltration, reverse osmosis and ultraviolet light. The current facility is the Phase 1 with expansion planned to go well beyond its current 8 million gallons/day. The proposed outcome of the AWPC-RWF partnership, over coming decades, is to increase the volume of wastewater that is recycled while reducing the volume of treated wastewater that enters the Bay. The reduction and sea level rise can be expected to change Artesian Slough to higher salinity nearer to the RWF outfall, affecting marsh characteristics and habitats in and near the channel, changes that should be considered in the Study.

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[2] Personal communication with Joseph Terry, USFWS, 2013.

[3] Meeting with Kerri Romanow, CSJ Director of Environmental Services, 9/26/14.

Zero Waste Dry Anaerobic Digester Facility, owned by Green Waste/Zanker, began operations in 2013 on Los Esteros Road adjoining Artesian Slough and the RWF outfall. It is built on a site leased from the RWF and which is the former Nine Par landfill. The facility's site is separated from the levee along pond A18 (and the previously proposed new levee location) by a wetland that is SMHM habitat and will need protection and mitigation to construct a new levee. While there may not be any direct impacts from or to this facility for a new levee, this is a land use change since 2006 that should be recognized in the DEIR.

We hope you will find information included here to be helpful in the development of the DEIR. Please include us on the notification for release of the DEIR or any other project documents subject to public review.

CCCR is a fully volunteer-run, 501(c)(3) nonprofit organization that has its beginnings in the citizen committee that worked with Congressman Don Edwards to establish the Refuge in 1972. Since that time we have worked to expand the Refuge, as authorized by Congress, and to act on behalf of wildlife protection and habitat preservation/restoration along the Bay's shoreline.

Sincerely,

Eileen P. McLaughlin

Eileen P. McLaughlin
Board Member, CCCR

CC: Florence LaRiviere, Chair, CCCR
Carin High, Vice Chair, CCCR

CITY OF
SAN JOSE
CAPITAL OF SILICON VALLEY

Department of Planning, Building and Code Enforcement
HARRY FREITAS, DIRECTOR

September 29, 2014

Mr. Michael Martin
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Re: Revised Notice of Preparation of a Draft Environmental Impact Report

Dear Mr. Martin,

Staff of the City of San José has received the above referenced Notice of Preparation. Under the California Environmental Quality Act (CEQA), the Santa Clara Valley Water District is the Lead Agency and the City of San José is a Responsible Agency for any and all projects that could directly or indirectly affect City lands and their accompanying resources and uses. I would like to submit the following scoping comments on behalf of the City of San José:

- The City of San José would like the Water Pollution Control Plant to be referenced as the San José-Santa Clara Regional Wastewater Facility (shortened as the "Facility" or "Wastewater Facility" or "RWF"). However, it would probably be helpful to include a notation identifying the RWF as having previously been called the San José/Santa Clara Water Pollution Control Plant.
- The Plant Master Plan for the San José / Santa Clara Regional Wastewater Facility (RWF) was adopted and the EIR was certified in November 2013. The DEIR should reflect the Final Plant Master Plan throughout, instead of stating that the Draft was used during analysis. The RWF Plant Master Plan can be found online here: http://www.sanjoseca.gov/index.aspx?nid=1669
- Please confirm that the EIR will cover both the shoreline study and the adopted levee construction project.
- Please ensure that all biologically sensitive habitats adjacent to the RWF south alignment are discussed, including the wetlands within the biosolids area and legacy lagoons.
- The railroad is a spur owned by the City. Any shipment needed at the Regional Wastewater Facility is coordinated with Union Pacific Railroad (UPRR). Please address operation and maintenance of the potential railroad gate.
- The Bay trail along the A18 levee is very close to continued biosolids treatment at the RWF so the smell should be considered when evaluating impact on the trail users.

CITY OF
SAN JOSE
CAPITAL OF SILICON VALLEY

Department of Planning, Building and Code Enforcement
HARRY FREITAS, DIRECTOR

Thank you for the opportunity to provide these comments. The City of San José looks forward to working with the SCVWD as environmental review for the Project proceeds. Please feel free to contact me with any questions you may have.

Sincerely,

WBerry

Whitney Berry, Environmental Planner
Planning, Building and Code Enforcement

cc: Jason Rogers, Planning Division Manager
John Davidson, Environmental Senior Planner
Julie Benabente, Supervising Environmental Services Specialist
Stephanie Green, Associate Environmental Services Specialist

STATE OF CALIFORNIA EDMUND G. BROWN JR., *Governor*

CALIFORNIA STATE LANDS COMMISSION
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

JENNIFER LUCCHESI, *Executive Officer*
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California Relay Service TDD Phone 1-800-735-2929
from Voice Phone 1-800-735-2922

Established in 1938

***Contact Phone:* (916) 574-1890**
***Contact FAX:* (916) 574-1885**

October 1, 2014

File Ref: SCH # 2006012020

Michael Martin
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Subject: Revised Notice of Preparation (NOP) for a Draft Environmental Impact Report/Statement (EIR/EIS) for South San Francisco Bay Shoreline Phase I Study, Santa Clara County

Dear Mr. Martin:

The California State Lands Commission (CSLC) staff has reviewed the subject NOP for the EIR/EIS for the South San Francisco Bay Shoreline Phase I Study (Project), which is being prepared jointly by the Santa Clara Valley Water District (District) as the lead agency under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), and the United States Army Corps of Engineers (USACE) and/or the U.S. Fish and Wildlife Service (USFWS) as the lead agency(ies) under the National Environmental Policy Act (NEPA) (42 U.S.C. § 4321 et seq.). The CSLC is a trustee agency for projects that could directly or indirectly affect sovereign lands and their accompanying Public Trust resources or uses. Additionally, because the Project involves work within sovereign lands, the CSLC will act as a responsible agency. CSLC staff requests that the lead agencies consult with us on preparation of the draft EIR/EIS as required by CEQA section 21153, subdivision (a), and the State CEQA Guidelines section 15086, subdivisions (a)(1) and (a)(2).

CSLC Jurisdiction and Public Trust Lands

The CSLC has jurisdiction and management authority over all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways. The CSLC also has certain residual and review authority for tidelands and submerged lands legislatively granted in trust to local jurisdictions (Pub. Resources Code, §§ 6301, 6306). All tidelands and submerged lands, granted or ungranted, as well as navigable lakes and waterways, are subject to the protections of the Common Law Public Trust.

As general background, the State of California acquired sovereign ownership of all tidelands and submerged lands and beds of navigable lakes and waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all people of the State for statewide Public Trust purposes, which include but are not limited to waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation, and open space. On tidal waterways, the State's sovereign fee ownership extends landward to the mean high tide line, except for areas of fill or artificial accretion or where the boundary has been fixed by agreement or a court. On navigable non-tidal waterways, including lakes, the State holds fee ownership of the bed of the waterway landward to the ordinary low water mark and a Public Trust easement landward to the ordinary high water mark, except where the boundary has been fixed by agreement or a court. Such boundaries may not be readily apparent from present day site inspections.

After reviewing the information contained in the NOP, CSLC staff has determined the Project includes State-owned sovereign lands under the jurisdiction of the CSLC consisting of natural, navigable, and tidal portions of Coyote Creek, Guadalupe Slough, Alviso Slough, Mallard Slough, and Mud Slough; therefore, a lease from the CSLC will be required for the District to implement the Project on sovereign lands. Please contact Al Franzoia (see contact information below) for further information about the extent of the CSLC's sovereign ownership and leasing requirements.

This letter is not intended, nor should it be construed as a waiver or limitation of any right, title, or interest of the State of California in any lands under its jurisdiction.

Project Description

The Project would encompass an area between the Guadalupe River and Coyote Creek in San Jose including portions of the Don Edwards San Francisco Bay National Wildlife Refuge (Refuge) (which includes most of the former salt ponds in the Project area, with the exception of Pond A-18). The District and USACE propose to reduce tidal flood risk in the area, which will also facilitate the tidal marsh restoration activity.

The proposed Project would include engineered levees along the Alviso North and Water Pollution Control Plant South alignments following existing levees built to protect against the 1 percent tidal event with anticipated sea level rise; a tide gate across Artesian Slough; "basic" restoration of salt ponds A9, A10, A11, A12, A13, A14, A15, and A18; a transition habitat slope of 30:1; and recreation measures to compensate for the loss of public access as the ponds in the Refuge are breached and restored to tidal marsh. These recreation measures include multi-use trails on top of the new proposed flood risk management levee with connection to the Bay Trail network, viewing platforms and benches, and trail upgrades to be made to an existing segment of the Bay Trail system along State Route 237.

Environmental Review

CSLC staff requests that the lead agencies consider the following comments when preparing the Draft EIR/EIS.

General Comments

1. NEPA Lead Agency: Under "Project Overview" (page 2), the NOP states that "The District, as a local sponsor of the Project, is undertaking the environmental review process in conjunction with the U.S. Army Corps of Engineers, the federal sponsor, and the U.S. Fish and Wildlife Service, the landowner." Please clarify whether the USACE will be the sole lead agency under NEPA, or if the USACE and the USFWS will be joint lead agencies.

2. Project Description: A thorough and complete Project Description should be included in the Draft EIR/EIS in order to facilitate meaningful environmental review of potential impacts, mitigation measures, and alternatives. The Project Description should be as precise as possible in describing the details of all allowable activities (e.g., types of equipment or methods that may be used, maximum area of impact or volume of sediment removed or disturbed, seasonal work windows, locations for material disposal, etc.), as well as the details of the timing and length of activities. Thorough descriptions will facilitate CSLC staff's determination of the extent and locations of its leasing jurisdiction, make for a more robust analysis of the work that may be performed, and minimize the potential for subsequent environmental analysis to be required.

Biological Resources

3. The Draft EIR/EIS should disclose and analyze all potentially significant effects on sensitive species and habitats in and around the Project area, including special-status wildlife, fish, and plants, and if appropriate, identify feasible mitigation measures to reduce those impacts. The CSLC staff is aware that the USFWS is a landowner for this project and will be involved in preparation of the NEPA documentation; staff requests that the Draft EIR/EIS include a discussion of consultation with the USFWS as well as the California Department of Fish and Wildlife (CDFW), including any recommended mitigation measures and potentially required permits identified by these agencies.

4. Construction Noise: The Draft EIR/EIS should also evaluate noise and vibration impacts on fish and birds from construction, restoration, or flood control activities in the water, on the levees, and for land-side supporting structures. Mitigation measures could include species-specific work windows as defined by CDFW, USFWS, and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS). Again, staff recommends early consultation with these agencies to minimize the impacts of the Project on sensitive species.

Climate Change

5. Greenhouse Gases: A greenhouse gas (GHG) emissions analysis consistent with the California Global Warming Solutions Act (Assembly Bill [AB] 32) and required by the State CEQA Guidelines should be included in the Draft EIR/EIS. This analysis should identify a threshold for significance for GHG emissions, calculate the level of

GHGs that will be emitted as a result of construction and ultimate build-out of the Project, determine the significance of the impacts of those emissions, and, if impacts are significant, identify mitigation measures that would reduce them to the extent feasible.

6. Sea Level Rise: A tremendous amount of State-owned lands and resources under the Commission's jurisdiction will be impacted by rising sea levels. Because of their nature and location, these lands and resources are already vulnerable to a range of natural events, such as storms and extreme high tides. Note that the State of California released the final "Safeguarding California: Reducing Climate Risk, an Update to the 2009 California Climate Adaptation Strategy" (Safeguarding Plan) on July 31, 2014, to provide policy guidance for State decision-makers as part of continuing efforts to prepare for climate risks. The Safeguarding Plan sets forth "actions needed" to safeguard ocean and coastal ecosystems and resources as part of its policy recommendations for State decision-makers. The NOP indicates that the Project will be designed with the potential effects of sea level rise in mind and that the Project could help mitigate potential se level rise effects by creating a "living" shoreline buffer. The lead agencies should also consider discussing in the EIR/EIS the role of the Project in implementing the goals and policies of the Safeguarding Plan.

   In addition, at its meeting on December 17, 2009, the CSLC approved the recommendations made in a previously requested staff report, "A Report on Sea Level Rise Preparedness" (Report), which assessed the degree to which the CSLC's grantees and lessees have considered the eventual effects of sea level rise on facilities located within the CSLC's jurisdiction. (The Report can be found on the CSLC's website, www.slc.ca.gov.) One of the Report's recommendations directs CSLC staff to consider the effects of sea level rise on hydrology, soils, geology, transportation, recreation, and other resource categories in all environmental determinations associated with CSLC leases. When considering lease applications, CSLC staff will (1) request information from applicants concerning the potential effects of sea level rise on their proposed projects, (2) if applicable, require applicants to indicate how they plan to address sea level rise and what adaptation strategies are planned during the projected life of their projects, and (3) where appropriate, recommend project modifications that would eliminate or reduce potentially adverse impacts from sea level rise, including adverse impacts on public access.

Cultural Resources

7. Title to Resources: The Draft EIR/EIS should also mention that the title to all archaeological sites and historic or cultural resources on or in submerged lands of California is vested in the State and under the jurisdiction of the CSLC. CSLC staff requests that the lead agencies consult with Assistant Chief Counsel Pam Griggs (see contact information below), should any cultural resources on State lands be discovered during construction of the proposed Project.

Additional Review

8. Deferred Mitigation: In order to avoid the improper deferral of mitigation, mitigation measures must either be presented as specific, feasible, enforceable obligations, or as formulas containing "performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way" (State CEQA Guidelines, §15126.4, subd. (b)). When developing the EIR/EIS, the lead agencies should review proposed mitigation measures to ensure this standard is met.

Thank you for the opportunity to comment on the NOP for the Project. As a trustee and responsible agency, the CSLC requests that you consult with us on this Project and keep us advised of changes to the Project description and all other important developments. Please send additional information on the Project to the CSLC staff listed below as the EIR/EIS is being prepared. Please refer questions concerning environmental review to Cynthia Herzog, Senior Environmental Scientist, at (916) 574-1310 or via e-mail at Cynthia.Herzog@slc.ca.gov. For questions concerning archaeological or historic resources under CSLC jurisdiction, please contact Assistant Chief Counsel Pam Griggs at (916) 574-1854 or via email at Pamela.Griggs@slc.ca.gov. For questions concerning CSLC leasing jurisdiction, please contact Alfred Franzoia, Public Land Management Specialist, at (916) 574-0992, or via email at Alfred.Franzoia@slc.ca.gov.

Sincerely,

Cy R. Oggins, Chief
Division of Environmental Planning
and Management

cc: Office of Planning and Research
A. Franzoia, LMD, CSLC
C. Herzog, DEPM, CSLC
J. Rader, Legal, CSLC

From: JLucas1099@aol.com
To: Michael Martin
Cc: Wade Blackard
Subject: SCVWD South San Francisco Bay Shoreline Project - NOP
Date: Friday, September 26, 2014 2:51:12 PM

Michael Martin
Santa Clara Valley Water District
5750 Almaden Expressway, San Jose, CA 95118

September 26, 2014

RE: NOP South San Francisco Bay Shoreline Project - Draft EIR

Dear Michael Martin,

In regards a Revised Notice of Preparation of South San Francisco Bay Shoreline Draft Environmental Impact Report on the Project to be undertaken by Santa Clara Valley Water District, in conjunction with U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service, please include full extent of artesian, fluvial and salt water intrusion into baylands and uplands, north and south of shoreline levee alignment, anticipated by 2067.

In the first paragraph of Levee Segment it states that the "community of Alviso has a history of fluvial flooding from Guadalupe River, which is east of community". Please note that most recent serious flooding was from Coyote Creek, 'east of community', while Guadalupe River runs south and west and to north of Alviso and Alviso is essentially built within its delta floodplain.

Artesian Slough is central to proposed alignment of South San Francisco Bay Shoreline Levee so its water sources need to be scientifically evaluated. At present it serves as outfall to San Jose/Santa Clara Water Quality Treatment Plant. Historically, as its name implies, it was artesian fed slough from overflowing aquifer contingent to both Coyote Creek and the Guadalupe River. Hydrologically it appears to be connected to Coyote Creek at location where breakaway in creek's western levee occurred at Agnews in 1983 flood of Alviso.

In wet years this water table in delta between Guadalupe River and Coyote Creek, north of #237, runs high, and with global warming and anticipated Bay level rise it could develop an inland sea, inboard of COE levee.
Saltwater intrusion will pass beneath any and all flood levees. At present it extends up rivers to Montague Expressway and would reach #101 with ease. By 2067, between rivers, would anticipate it to result in high levels of groundwater throughout 'golden triangle' research, business and light industrial complex?

Analysis of the Agnew's aquifer might shed some light on pathways of artesian up-welling at Bay sloughs as well as saltwater intrusion into confined and unconfined zones, and into subsided regions of San Jose. This should be a critical element of shoreline study if it is to encompass 50 years of cumulative impacts to levee.

Environmental impact review needs to also assess the domino effect of placing fill on inboard wetlands with significant artesian action that would then bubble up on adjacent low lying areas such as the Town of Alviso. (I suggest this in consideration of COE installation of articulated concrete mattresses in Guadalupe River bed that appears to have acerbated groundwater intrusion under airport runways and neighboring office buildings.) This would not be an actual impact of levee itself but of the inboard development that it is bound to facilitate.

In alternative analysis I might request that consideration be given to incorporation of managed ponds to buffer Alviso that could be emptied in anticipation of peak storm system or pineapple express in upper watershed, that would impact Guadalupe River or Coyote Creek flows, or both. Rainfall data for upper Mount Umunhum and Mount Hamilton in high intensity event needs to be assessed to gage full impact and timing of peak flow in streams as they reach high bay level and fluvial reflux current caused by storm's low barometric pressure.

There needs be consideration of degree to which three foot wave ride-up in South Bay will routinely threaten Alviso with 'aqua alta' conditions I believe managed ponds to serve as flood retention basins are likely to be best feasible buffer to moderate this, as well as fluvial reflux in storm events. Hope EIR includes it as option. Return to tidal salt marshes in South Bay is grand but managed retention basins can provide critical habitat.

Appreciate environmental focus on continuity of tidal salt marsh habitat around end of South Bay, especially for salt marsh harvest mouse, and on avoidance of habitat fragmentation and degradation. This is a critical marsh area that is one of few remaining landscapes where rising bay levels can be managed to retain viable wetlands habitat for endangered species, and it should include extension of habitat up into adjacent riparian corridors.

In first environmental document for water quality treatment plant it was noted that the South Bay is incubator for fisheries and wildlife of Estuary and the estuary is incubator for Pacific Ocean. Please aim to restore this ideal.

Will submit this before I forget deadline, and thank you for all consideration of concerns.

Libby Lucas, 174 Yerba Santa Ave., Los Altos, CA 94022

County of Santa Clara
Department of Environmental Health

Vector Control District
1580 Berger Drive
San Jose, California 95112
(408) 918-4770 FAX (408) 298-6356
www.sccvector.org

Mr. Michael Martin
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

September 19, 2014

Dear Mr. Martin,

The Santa Clara County Vector Control District received notification of your Revised Notice of Preparation of a Draft Environmental Impact Report for the South Bay Shoreline Phase I Study on August 29, 2014. Per time limits mandated by state law, our comments on the preparation of this draft PEIR are submitted herein.

Should you have additional questions on these comments or any other vector control-related issue, please contact me at (408) 918-3482.

Regards,

Noor Tietze, Ph.D.

Scientific-Technical Services Manager

From: Santa Clara County Vector Control District

Subject: Comments on Revised Notice of Preparation of a Draft EIR

Project: South San Francisco Bay Shoreline Phase I Study

State Clearinghouse Number: 200601202

The core objectives of the Santa Clara County Mosquito and Vector Control District are to detect and minimize vector-borne disease, to abate mosquitoes, and to assist the public in resolving problems with rodents, wildlife, and insects of medical significance. To this end, our programs employ an Integrated Pest Management approach to effectively control mosquitoes while minimizing environmental impact.

We encourage the Santa Clara Valley Water District to consider the potential impact of the project on the creation of mosquito breeding sources. Existing south bay marshes are major sources of several species of mosquitoes within the county, including those that vector West Nile virus and other diseases. Sound design decisions in the planning stages can greatly diminish the potential for mosquito problems and reduce or avoid pesticide applications or other vector control actions in the future.

The following section excerpted from "Guidelines, Checklists, and Standards for Vector Prevention in Proposed Developments" (full document enclosed) provides guidance on vector prevention standards for mosquito and midge prevention in relevant restoration projects.

D. Marsh Restorations and Marine Developments

1. Marsh restoration and fish and wildlife enhancement projects should provide free tidal flow through deep channels and small connecting laterals.
2. Marsh levees or embankments capable of trapping water during high tides should have adequate breaks to ensure tidewater exit.
3. Low areas of marsh fringes that are subject to flooding during high high [sic] tides and which cannot be made self draining should either be filled in to prevent ponding or be deepened to ensure fish survival.
4. Marinas and other commercial developments should not contain small coves or shallow areas where accumulations of debris can be trapped or emergent vegetation can thrive.
5. Sites for disposal of dredged material should be properly diked, with provisions for drainage to dewater the dredged deposits and storm water removal. As the dredged material consolidates, deep cracks may develop, requiring periodic disking to cover the cracks to prevent a mosquito producing habitat from developing.

We encourage the Santa Clara Valley Water District to contact our agency for further information and guidance on preventing mosquito issues while drafting this report. Active partnerships with local agencies and special districts are invaluable in preventing unnecessary environmental harm, taxpayer expense, and public health repercussions. We look forward to reviewing the draft EIR when available.

Contact information

For further information, please contact:

Noor Tietze, Ph.D.
Scientific-Technical Services Manager
Santa Clara County Vector Control District
1580 Berger Drive
San Jose, CA 95112
(408) 918-3482
Noor.Tietze@deh.sccgov.org

ALAMEDA COUNTY WATER DISTRICT

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Operations Manager
WILBERT LIGH
Finance and Administration Manager

February 3, 2006

Ms. Brenda Buxton
South Bay Salt Pond Restoration Project
California Costal Conservatory
1330 Broadway 11th Floor
Oakland, CA. 94612

Dear Ms. Buxton:

Subject: Notice of Preparation/Notice of Intent of a Draft Environmental Impact Statement/Environmental Impact Report/Feasibility Report for the South San Francisco Bay Shoreline Study: Alviso Ponds and Santa Clara County Interim Feasibility Study

The Alameda County Water District (ACWD) wishes to thank you for the opportunity to comment on the "Notice of Preparation/Notice of Intent of a Draft Environmental Impact Statement (EIS)/Environmental Impact Report (EIR)/Feasibility Report for the South San Francisco Bay Shoreline Study: Alviso Ponds and Santa Clara County Interim Feasibility Study" which is closely interrelated with the ongoing South Bay Salt Pond Restoration Project.

ACWD supplies water to a population of over 320,000 in the Cities of Fremont, Newark, and Union City. A major portion of this water supply is obtained from the Niles Cone Groundwater Basin that approximately coincides with ACWD's boundaries. The Niles Cone Groundwater Basin extends beneath the Alameda County portion of the project area.

ACWD has been concerned about abandoned wells and their proper destruction since the late 1950's. As a result of previous and ongoing cooperative studies between the Department of Water Resources and ACWD, it has been determined that improperly destroyed wells were a significant contributing factor in the degrading of water quality in the Niles Cone Groundwater Basin by salt water intrusion. Abandoned wells provide an interconnection between aquifers and may allow salt water from a shallower aquifer to migrate vertically and impact the groundwater basin's deeper aquifers. Therefore, the proper destruction of abandoned wells is critical for the protection of water quality and ensuring the continued use of the groundwater basin for water supply to ACWD customers.

To date, a total of seventy-four (74) abandoned wells within ACWD's boundaries have been identified within the South Bay Salt Pond Restoration Project area (see Figure 1 and Table 1). The purpose of this letter is to: 1) give an update on the status of the abandoned wells in the South Bay Salt Pond Restoration Project Area since ACWD's October 28, 2004, letter to the California Coastal Conservancy, and 2) comment on the Notice of Preparation/Notice of Intent of a Draft EIS/EIR/Feasibility Report for the South San Francisco Bay Shoreline Study: Alviso Ponds and Santa Clara County Interim Feasibility Study.

Status of Abandoned Wells

Upper Eden Landing

ACWD has been working with the California Department of Fish and Game (DFG) in locating abandoned wells within the Upper Eden Landing Project area (see Figure 1). Historical records indicate the existence of twelve (12) abandoned wells in this area of the restoration project. ACWD has verified the location of ten (10) of the twelve (12) abandoned wells to date (see Table 1). Since 2003, only two (2) of the ten (10) located abandoned wells have been destroyed. Based on discussions between the DFG and ACWD, the DFG intends to continue destruction efforts during the dry season in 2006.

Baumberg Ponds

ACWD is also working with Cargill Salt in locating abandoned wells within the remaining Eden Landing Restoration Project area, also known as the Baumberg Ponds (see Figure 1). To date, fifty-six (56) wells have been identified in the Baumberg Ponds. Currently, thirty (30) of the fifty-six (56) wells have been located and twenty-two (22) have been destroyed.

Our records indicate that twenty-two (22) of the twenty-six (26) wells that have not been located are within the Alameda County Flood Control channel between Alvarado and San Francisco Bay or beneath channel levees. ACWD has agreed that these wells: 1) are most likely not located on Cargill's former property, 2) would be extremely difficult and costly to locate and access, and 3) were most likely addressed during the main outlet channel construction.

Therefore, only four (4) wells have not been located. When weather and field conditions permit, both ACWD and Cargill staff will attempt to locate the wells during the summer of 2006. ACWD believes these wells can be located and properly destroyed. It is important to keep in mind that since the areas will be transformed into future tidal wetlands by levee breaches and other construction activities, there will never be a better time to access the well sites.

Alameda County Alviso Ponds

Currently, there are 5 wells that have been identified within ponds A 22 and A 23 (see Figure 2). An additional well was identified in December 2004, between ponds A 20 and A 21 known as the Drawbridge area. Based on historical documents, ACWD believes that additional wells may be located within the Drawbridge area. It is ACWD's understanding that the Drawbridge area is not part of the South Bay Salt Pond Restoration Project; however, because Drawbridge is located between two ponds that are part of the restoration project, the area may be impacted by activities associated with the restoration. To date, a significant amount of restoration work has been completed, but no work has been initiated for the destruction of the wells.

Table 1

Number of abandoned wells located within ACWD's boundaries identified within the South Bay Salt Pond Restoration Project area.

Area within the SBSP Restoration	Number of Identified Wells	Number of located wells	Number of "Not Found" Wells	Number of Wells Destroyed to Date
Upper Eden Landing	12	10	2	2
Baumberg Ponds	56	30	26	22
Alameda County Alviso Ponds	6*	N/A	N/A	N/A
Total Wells	**74**	**40**	**28**	**24**

N/A = Not Available; * = Additional Wells are Suspected.

Comments for Notice of Preparation/Notice of Intent of a Draft EIS/EIR/Feasibility Report

ACWD has reviewed the Notice of Preparation/Notice of Intent of a Draft EIS/EIR/Feasibility Report and would appreciate your consideration of the following comments:

1. As restoration activities continue, ACWD is concerned about access to the various abandoned wells due to fluctuating water levels and/or planned levee breaches. It is imperative that the abandoned wells be addressed prior to initiating any restoration activities that could prevent or limit well destruction activities. It is ACWD's understanding that additional levees in the Alameda County Alviso Ponds are expected to be breached in the near future. Any well(s) that will be affected by a levee breach should be properly destroyed prior to the levee breach or the levee breach should be postponed until the abandoned well(s) are properly destroyed. ACWD requests that this significant impact be addressed in the draft EIS/EIR.

2. ACWD requests that the draft EIS/EIR include the requirement that ACWD be notified of plans for improvements within ACWD boundaries beyond Ponds A 19, A 20, A 21, A 22, and A 23.

3. ACWD also requests that the draft EIS/EIR include the requirement of obtaining a drilling permit from the Alameda County Water District prior to the start of well destruction activities.

Thank you for the opportunity to comment on the project at this time. If you have any questions, please contact Steven Inn, Groundwater Resources Manager, at (510) 668-4441 or Michelle Myers, Well Ordinance Program Coordinator, at (510) 668-4454.

Sincerely,

Robert Shaver
Engineering Manager

RECEIVED
FEB 0 6 2006
COASTAL CONSERVANCY
OAKLAND, CALIF.

mm:jr

cc: Mendel Stewart, United States Fish and Wildlife Service
Clyde Morris, San Francisco Bay National Wildlife Refuge
Robert Floerke, California Department of Fish and Game
Carl Wilcox, California Department of Fish and Game
Robert Douglass, Cargill Salt
Steven Inn, ACWD
Michelle Myers, ACWD

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COASTAL CONSERVANCY
OAKLAND, CALIF.

STATE OF CALIFORNIA
ARNOLD SCHWARZENEGGER, *Governor*

CALIFORNIA STATE LANDS COMMISSION
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

PAUL D. THAYER, *Executive Officer*
(916) 574-1800 FAX (916) 574-1810
Relay Service From TDD Phone **1-800-735-2929**
from Voice Phone **1-800-735-2922**

Contact Phone: **(916) 574-1890**
Contact FAX: **(916) 574-1885**

January 19, 2006

Ms. Nadell Gayou
The Resources Agency
901 P Street
Sacramento, CA 95814

Ms. Brenda Buxton
California Coastal Conservancy
1330 Broadway, 11th Floor
Oakland, CA 94612

Dear Ms. Gayou and Ms. Buxton:

Subject: Notice of Preparation for the South San Francisco Bay Shoreline Study: Alviso Ponds and Santa Clara County Interim Feasibility Study

Staff of the California State Lands Commission (CSLC) has received the above referenced Notice of Preparation. Under the California Environmental Quality Act (CEQA), California Coastal Conservancy is the Lead Agency and the CSLC is a Responsible and/or Trustee Agency for any and all projects which could directly or indirectly affect sovereign lands, their accompanying Public Trust resources or uses, and the public easement in navigable waters.

The State acquired sovereign ownership of all tidelands and submerged lands and beds of navigable waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all the people of the State for statewide Public Trust purposes which include waterborne commerce, navigation, fisheries, recreation, habitat preservation, and open space. The landward boundaries of the State's sovereign interests are generally based upon the ordinary high water marks of these waterways as they last naturally existed. Thus, such boundaries may not be readily apparent from present day site inspections. The State's sovereign interests are under the jurisdiction of the SLC. Although the NOP does not provide any maps, we believe this project will encroach onto State lands. Please contact Nanci Smith at (916) 574-1862 regarding the application process.

Sincerely,

Dwight E. Sanders

Dwight E. Sanders, Chief
Division of Environmental Planning
and Management

RECEIVED
JAN 24 2006
COASTAL CONSERVANCY
OAKLAND, CALIF.

City of Palo Alto
Public Works Department

February 2, 2006

Ms. Yvonne LeTellier
US Army Corps of Engineers
San Francisco District
333 Market Street, 8th Floor
San Francisco, CA 94105

Ms. Brenda Buxton
California State Coastal Conservancy
1330 Broadway, 11th Floor
Oakland, CA 94612

Divisions

Administration
650.329.2373
650.329.2299 fax

Engineering
650.329.2151
650.329.2299 fax

Environmental
Compliance
650.329.2598
650.494.3531 fax

Equipment
Management
650.496.6922
650.496.6958 fax

Facilities
Management
650.496.6900
650.496.6958 fax

Operations
650.496.6974
650.852.9289 fax

Regional Water
Quality Control
650.329.2598
650.494.3531 fax

Subject: Scoping comments for the South San Francisco Bay Shoreline Study

Dear Ms. LeTellier and Ms. Buxton:

Pursuant to the Notice of Preparation issued by the US Army Corps of Engineers and the State Coastal Conservancy for the South San Francisco Bay Shoreline Study, I would like to submit the following scoping comments on behalf of the City of Palo Alto:

- There are approximately 2300 parcels in the City of Palo Alto that are within the Special Flood Hazard Area (SFHA) designated by the Federal Emergency Management Agency (FEMA) due to the risk of tidal flooding. In addition to being susceptible to flood damage, owners of these parcels are subject to a mandatory flood insurance purchase requirement and special building restrictions. From the City's perspective, one of the primary objectives of the Shoreline Study should be the identification and implementation of a project that removes all of these parcels from the SFHA. In order to achieve this objective, the project will need to provide protection from a 1% (100-year) tide event, including provisions for compliance with FEMA freeboard standards. It is understood that the study will examine a variety of flood control options (including alternatives that provide a lower level of flood protection). If, however, the preferred alternative identified in the study would not meet FEMA criteria for eliminating the floodplain, then the City advocates a plan wherein one of the local sponsors contributes additional funds in order to pay the cost of expanding the project so that it does conform to FEMA standards for elimination of the SFHA.

- The City has been notified that FEMA is currently conducting a restudy of the tidal Base Flood Elevations (BFEs) for San Francisco Bay. The restudy will take into account the effects of global sea level changes, wind and tsunami impacts, and other factors on tidal elevations. It is likely that the revised tidal BFEs will be higher than the existing figures. Therefore, it is critical that staff and consultants working on the Shoreline Study coordinate closely with representatives from FEMA throughout the course of the study in order to maintain consistency in design assumptions and methodologies. It would be tragic to identify a project alternative intended to provide flood protection from a 1% (100-year) tide event only to find later that FEMA considers it to provide a lower level of protection due to a revised tidal BFE.

- The Palo Alto Flood Basin (Basin) is a 600-acre flood detention facility within the study area of the Shoreline Study. The Basin, located north of and adjacent to Charleston Slough, receives fresh water runoff from Matadero, Barron, and Adobe Creeks and buffers these creeks from tidal effects (see attached map). The Basin's outlet structure is equipped with a set of 15 flap gates that allow discharge of fresh water stream flows to the Bay, but prevent the Bay waters from entering the Basin. In the 1970s, one of the original one-way flap gates was replaced with a two-way sluice gate that allows a limited amount of Bay water into the Basin in order to provide relatively stable salinity and water levels in the Basin throughout the year. During storm events, the Basin provides a large holding capacity to store storm runoff from the three local creeks during high tide. The stored runoff is released through the outlet structure once the tide recedes. From the city's perspective, it is very important to maintain the storage capacity of the Basin in order to provide continued upstream flood protection. When considering alternatives for levee improvements as part of the Shoreline Study, it is requested that the improvements be proposed for the levees on the outer (Bay side) edge of the Basin in order to prevent tidal waters from entering the Basin (and thereby compromising the Basin's storage capacity for fresh water flows). Although improvements to the inner (City side) Basin levees might be effective at preventing tidal flooding of developed areas west of Highway 101, this design scheme would allow potential flooding of the Basin with tidal waters. Loss of storage capacity in the Basin would create greatly heightened flood risk for upstream properties in the event of concurrent or immediately subsequent high fresh water flows from the three tributary creeks.

- The City of Palo Alto is a member agency of the San Francisquito Creek Joint Powers Authority (JPA). The JPA is serving as the local sponsor for an ongoing Corps of Engineers flood damage reduction and ecosystem restoration project for San Francisquito Creek. This project has recently entered the feasibility study stage. The scope of this project also includes identification of alternatives to address tidal flooding along Palo Alto's bay frontage. It is imperative that the two concurrent Corps studies (Shoreline Study and San Francisquito Creek) be well-coordinated in order to avoid duplication of effort and ensure the development of compatible project alternatives. The City requests that Corps and local sponsor staff from both projects communicate with each other regularly throughout the course of the studies and that they conduct regular face-to-face meetings to ensure effective coordination.

Thank you for the opportunity to provide comments on the scope of the South San Francisco Bay Shoreline Study. We look forward to working closely with the Corps, the Coastal Conservancy, and the JPA to achieve a successful flood control and ecosystem restoration project. If you have any questions or need further information, please contact me at (650) 329-2325 or Joe Teresi of my staff at (650) 329-2129.

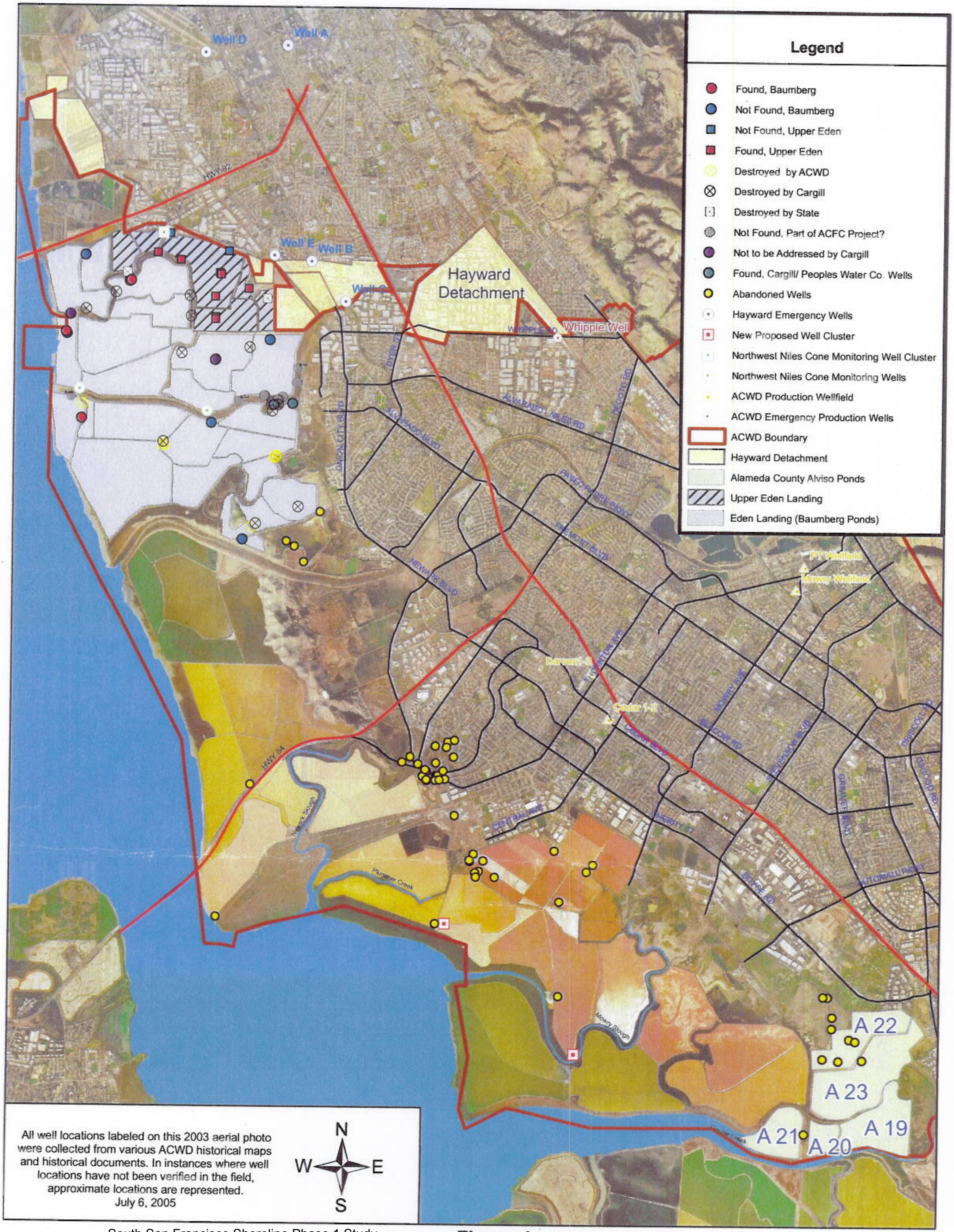
Sincerely,

Glenn S. Roberts
Public Works Director

/jt

Attachment

cc: Dena Mossar, Palo Alto City Council
Steve Emslie, Planning Director
Greg Betts, Open Space Manager
Cynthia D'Agosta, San Francisquito Creek JPA
Beau Goldie, Santa Clara Valley Water District
Ann Draper, Santa Clara Valley Water District



All well locations labeled on this 2003 aerial photo were collected from various ACWD historical maps and historical documents. In instances where well locations have not been verified in the field, approximate locations are represented.
July 6, 2005

Figure 1

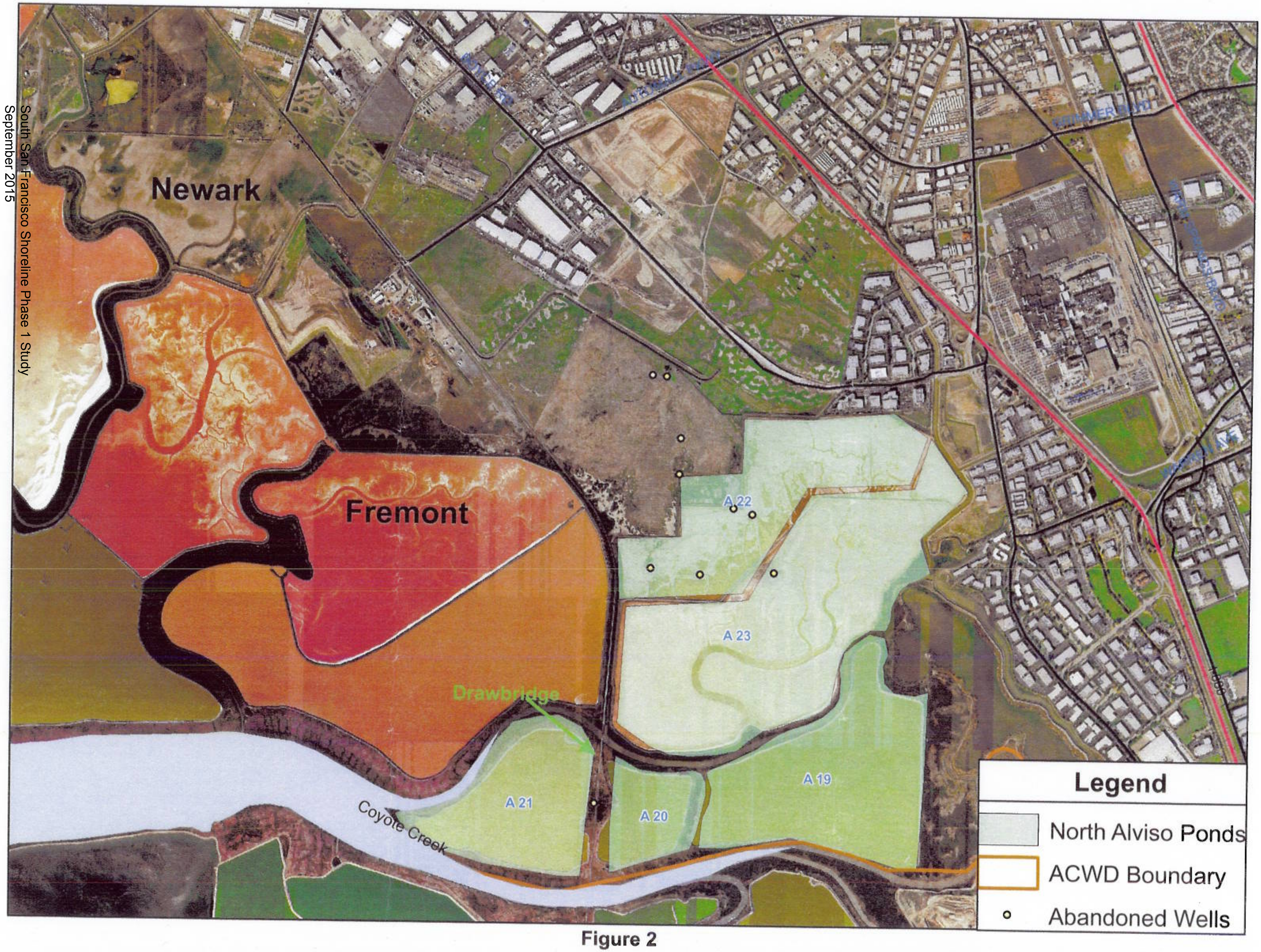

Newark
Fremont
BOYCE RD
AUTO MALL PKWY
GRIMMER BLVD
WARM SPRINGS BLVD
WARREN AVE
I-880
A 22
A 23
A 19
A 20
A 21
Drawbridge
Coyote Creek
Legend
North Alviso Ponds
ACWD Boundary
Abandoned Wells

Figure 2

SAN FRANCISCO
BAY TRAIL

February 6, 2006

Brenda Buxton
California Coastal Conservancy
1330 Broadway, 11th Floor
Oakland, CA 94612

Subject: **Notice of Preparation/Notice of Intent of a Draft Environmental Impact Statement/Environmental Impact Report/Feasibility Report for the South San Francisco Bay Shoreline Study: Alviso Ponds and Santa Clara County Interim Feasibility Study**

Dear Ms. Buxton:

I am writing to submit comments on behalf of the San Francisco Bay Trail Project on the NOP/NOI for the South San Francisco Bay Shoreline Study EIR/EIS. The Bay Trail Project is an organization administered by the Association of Bay Area Governments (ABAG) that coordinates implementation of the Bay Trail. When complete, the Bay Trail will be a continuous 500-mile network of bicycling and hiking paths encircling both the San Francisco and San Pablo bays. It will link the shoreline of all nine Bay Area counties, passing through 47 cities, and will cross the major toll bridges in the region. To date, more than half the length of the proposed system has been developed.

The South San Francisco Bay Shoreline Study presents opportunities to complete the Bay Trail through the South Bay. While there is existing Bay Trail in Alviso and along Coyote Creek in Milpitas, a key gap exists between these two locations. This segment of the Bay Trail is an important connection in the South Bay and we recommend that the EIS/EIR incorporate alternatives for completing this gap.

The Bay Trail Project has been actively involved in the South Bay Salt Pond Restoration Project planning process through representation on the Stakeholders Forum and providing comments, assistance and suggestions for public access and recreation. The South Bay Salt Pond Restoration Project action alternatives, Alternative B, (the managed pond emphasis) and

Administered by the Association of Bay Area Governments
P.O. Box 2050 • Oakland California 94604-2050
Joseph P. Bort MetroCenter • 101 Eighth Street • Oakland California 94607-4756
Phone: 510•464•7935
Fax: 510•464•7970

Alternative C, (focused on tidal habitat), show a range of trail alignments framing the Bay that offer remarkable recreational opportunities compatible with proposed habitat restoration.

We appreciate your efforts to address the effects of public access on biological resources and the potential impacts on existing and new trail facilities. We suggest that you consider expanding your "Recreation and Public Access" objectives to include a variety of public access improvements, such as:

- Improving existing public access and recreation in the project area
- Providing recreation and health benefits for a variety of users with different needs and abilities
- Enhancing opportunities for linking the project areas to existing public open spaces, trails and adjacent communities
- Allowing for a range of options to complete the Bay Trail
- Providing new public access such as trails and staging areas that are integrated with historic and cultural features or other points of interest to allow for interpretive and educational components
- Increasing public respect and appreciation for the Bay

These objectives are consistent with the South Bay Salt Pond Restoration Project goals. Overall, we encourage the EIR/EIS analysis to critically consider two of the primary Bay Trail policies: to separate as much of the trail as possible from roadways and to locate trails as close to the shoreline as feasible without impacting restored habitat.

In closing, I again offer you our support and assistance in improving the Bay Trail through the South San Francisco Bay Shoreline Study area. The Bay Trail is a unique regional resource that will provide residents of the South Bay and the entire Bay Area with increased access to the outdoors and the shoreline, inexpensive recreation, exercise and sightseeing opportunities, and greater transportation options. Please call me at (510) 464-7935 if you have any questions or concerns about any of the suggestions we have made.

Sincerely,

Laura Thompson

Laura Thompson
Bay Trail Project Manager

Brenda Buxton

From: Waldman, Jeff, Maj, SE, 359-9261 [Jeff.Waldman@CAMOFF.ANG.AF.MIL]

Sent: Wednesday, February 08, 2006 3:19 PM

To: 'Yvonne.c.LeTellier@usace.army.mil'; 'bbuxton@scc.ca.gov'

Subject: Wetlands Feasibility Study comments from the Air Guard at Moffett

Yvonne & Brenda,
I'm pasting the content from the Memorandum for Record I sent earlier this week so you have them electronically. I was cc'ed a copy of comments made by the USDA representative here at Moffett. His comments closely mirror ours & I've included those below as well.

I know that this issue is new to you both. For your reference you may want to look to the following sites for further information:

http://afsafety.af.mil/sef/bash/sefw_home.shtml
http://www.ahas.com/bash/?p=bash
http://www.birdstrike.org/

If you have any questions I can best be reached at this e-mail address or by calling 650-603-9261.

Best,
Jeff Waldman, Maj, CA ANG
129th RQW Chief of Safety

-----Original Message-----
6-Feb-06
MEMORANDUM FOR Ms. Yvonne LeTellier, Project Manager
U.S. Army Corps of Engineers
333 Market Street, 8th Floor
San Francisco, California 94105-
2197

THROUGH: COL BAGDASARIAN

FROM: 129 RQW/SE

SUBJECT: Public comment for the Interim Feasibility Study of the South San Francisco Bay Shoreline Study

1. Representing the California Air National Guard and the 129th Rescue Wing, I attended the public scoping meeting held on 25 Jan 06 to verbally offer comments on the joint Environmental Impact Statement (EIS)/Environmental Impact Report (EIR) Feasibility Report, hereafter called the Report. The purpose of this memorandum is to formalize and expand on those comments to the three lead agencies drafting the Report -- U.S. Army Corps of Engineers (Corps), U.S. Fish and Wildlife Services (USFWS), and California State Coastal Conservancy (SCC).

2. As users of Moffett Federal Airfield, we are very concerned about any project that may impact the safety of the environment surrounding Moffett. Our specific concern here lies in how wetland restoration could increase the hazard associated with aircraft striking birds in close proximity to the airfield. We wish to call the Corps and USFWS attention to the attached FAA Advisory Circular regarding "Hazardous Wildlife Attractants on or Near Airports" (AC No: 150/5200-33A, July 27, 2004), hereafter called the AC. Following the guidance laid out in CFR 139, the AC designates a 10,000 foot perimeter around airfields such as Moffett which serve

2/14/2006

turbine-powered aircraft within which "hazardous wildlife attractants should be avoided, eliminated, or mitigated." We believe that a wetlands restoration effort in close proximity to Moffett can be pursued in a safe, sensible manner simultaneously mitigating wildlife hazards to aircraft while achieving the stated project goals of "flood protection and/or ecosystem restoration."

3. In drafting the Report, we urge the Corps, USFWS, and SCC to consult with experts on how best to restore the wetlands near Moffett while taking aviation safety into consideration. To that end, the Corps and USFWS should consult with U.S. Department of Agriculture (USDA) Wildlife Services or other wildlife damage management biologists as suggested in the AC. Last month a team of Air Force wildlife biologists conducted a review of wildlife hazard conditions at Moffett. During their visit these experts informally offered some recommendations on how to achieve wetlands restoration while simultaneously eliminating all hazardous bird attractants within the 10,000 foot separation zone. While we recognize that drafting the Report will require you to retain experts of your own, we offer the following recommendations in the interest of aviation safety.

a. Restoration project is designed to eliminate non-native and invasive Spartina alterniflora (Cordgrass) within the SF Bay estuaries. Recommend conversion to contiguous native species (Spartina foliosa) or similar cover without creek channels or pockets of open water over the entire area within a two-mile zone off the runway ends.

b. Ensure there is a steep, rapid transition to open water (deeper the better) off the end of the salt marsh habitat to minimize or eliminate mudflats exposed at low tide. This will limit waders, shorebirds, and waterfowl feeding and loafing areas.

d. Ensure there is no exposed high ground amid open water within the two-mile zone where evening roost of gulls, cormorants, pelicans and other species may occur. This will require exploring the option of eliminating all levees within the two-mile separation zone.

e. Construct no boardwalks, poles, markers etc in the salt marsh that will attract perching and roosting birds within the separation zone.

4. I trust that this provides adequate detail on the concerns of the Air National Guard in this matter. We welcome the opportunity to work with the Corps and the USFWS going forward in the drafting of the Report. Any questions on this letter should be addressed to the 129th Rescue Wing Safety Office at SE.129RQW@camoff.ang.af.mil.

JEFFREY WALDMAN, Major, CA ANG
Chief of Safety

Attachment:
FAA Advisory Circular: "Hazardous Wildlife Attractants on or Near Airports"

cc: Dr. Steven Zornetzer, Deputy Director, NASA Ames Research Center
Maj Dwight Robinson, US Army, AFDD Flight Projects Office Chief

1st Ind, Wing/CC, 8-Feb-06

MEMORANDUM FOR Ms. Yvonne LeTellier, Project Manager, US Army Corps of Engineers

I sincerely hope the Corps, USFWS and SCC take aviation safety concerns into consideration when drafting the Report. I can only speak for my organization, but I suspect that the myriad of agencies which rely on Moffett FAF as a resource share in these concerns. I look forward to hearing how the Corps and USFWS plan to incorporate aviation safety into the South Bay Salt Pond Restoration Project.

AMOS BAGDASARIAN, Colonel, CA ANG
Wing Commander

-----Original Message-----

At 04:37 PM 2/6/2006, Anthony.J.Novack@aphis.usda.gov wrote:

\>The following comments were submitted by USDA-WS to the Army Corps of
\>Engineers and Fish and Wildlife Service regarding the Salt Pond
\>Restoration Project just north of Ames.
>
>
\>To whom it may concern,
>
\>The South San Franscisco Bay Shoreline Restoration plan should take into
\>consideration the impacts that restoration plans will have to aircraft and
\>human safety at Moffett Federal Airfield in Santa Clara County. Migratory
\>shorebirds, waterfowl, and seabirds represent significant threat to
\>aircraft that utilize Moffett Field. The existing project management plan
\>states â€œMany of the ponds will remain as managed ponds and be enhanced
\>to maximize their use as feeding and resting habitat for migratory
\>shorebirds and waterfowl traveling on the Pacific Flyway.â€ As such, the
\>restoration plan could create greater risk to aircraft. Aircraft that
\>collide with birds during flight can suffer significant damage and/or
\>human injury after being struck.
>
\>Within a two mile radius of Moffett Field, or any other airport, the
\>restoration plan should not manage ponds to enhance and maximize their use
\>by shorebirds and waterfowl. For reference, see the Federal Aviation
\>Authorities Advisory Circular # AC5200-33A whose subject is Hazardous
\>Wildlife Attractants on or near airports. Five ponds fall within a 2 mile
\>radius of Moffett Federal Airport. These ponds are identified on the
\>project map as AB1, A2E, AB2, A3W, and A2W.
>
\>Within these five ponds, the restoration project should attempt to
\>minimize their attractiveness to most kinds of waterfowl, flocking
\>shorebirds and other colonial roosting birds. Pursuant to this goal, I
\>make the following recommendations.
>
>1) Promote a full conversion of salt production ponds AB1, A2E,
\>AB2, A3W, and A2W into tidal marsh habitat
>2) Minimize or eliminate the amount of open water
>3) If any openwater areas must remain then, make these sites deepwater
>4) Prevent the inclusion of internal islands and, remove or connect
\>any existing islands.
>
\>By following these recommendations, I believe that the attractiveness of
\>these ponds to gulls, terns, ducks, geese and shorebirds will be
\>reduced. Consequently, the safety of aircraft operations at Moffett
\>Federal Airfield will be improved. Many of the remaining objectives of
\>the restoration plan should be unaffected.

```
>
>Sincerely,
>
>Anthony Novack
>Wildlife Biologist
>USDA-Wildlife Services
>Moffett Field, CA  94035
>650-604-4119
>Email:  anthony.j.novack@aphis.usda.gov
```

Brenda Buxton

From: WildlifeStewards@aol.com
Sent: Sunday, February 05, 2006 12:10 PM
To: Yvonne.C.LeTellier@usace.army.mil; bbuxton@scc.ca.gov; Mendel_Stewart@fws.gov; bdyer@valleywater.org
Subject: South Bay Shoreline Study Comments

Note: Multiple attempts were made to submit the comments below through the project web site. It is possible that the comments was successfully transmitted that way and simply not confirmable to the submitter. I found that hitting the submit button promptly produced a message trying to download a file to my computer. I suggest that the web site needs to be fixed.

==

To the Army Corps of Engineers and its agency partners in the South Bay Shoreline Study:

Representing Wildlife Stewards, I wish to thank you for the opportunity, now and future, to participate as a public contributor to this project. We heartily welcome this study as part of our support for the San Francisco Bay National Wildlife Refuge Complex, the South Bay Salt Pond Restoration Project, the protection of the Bay and of all of the surrounding communities and as a benefit to wildlife and the wildlife-enjoyment of people.

At this time, we would like to ask that Phase I and subsequent phases of the South Bay Shoreline Study give consideration to the following issues involving the 100-year zone equal to the consideration given to shoreline wetlands and the ponds in the South Bay Salt Pond Restoration Project:

1. Habitats used by or potentially suitable for sensitive species within the 100-year Flood plain. I raised this issue at the January 25th, 2006 public meeting and wish to reiterate it here. The published Notice of Intent/Notice of Preparation specifically spoke about consideration for sensitive species in shoreline, wetland habitats but not specific to similarly sensitive species in the 100-year flood zone. An example is the burrowing owl, a species of special concern, and one that is found locally in upland and semi-wetland areas all along this shoreline. Please correct this omission for the biological role of the project.

2. Landfills within the 100-year Flood Plain: The study area for Phase I and subsequent phases will includes a number of landfills, both closed and in active use. We request that the South Bay Shoreline Study include assessment of environmental and economic impact of all such landfills. What would the impact of a 100-year flood be on these landfills? How might post-closure development and usage affect leachate seepage locally and downstream as the aftermath of such a flood? Are there particular protective actions that should be made preparatory to such an event?

We appreciate your attention and consideration.

Eileen McLaughlin, Project Director
Wildlife Stewards
P.O. Box 1177, Alviso, CA 95002-1177
408-262-5513 ext. 106, 408-262-2867 fax
408-257-7599 home, 408-230-0054 cell
WildlifeStewards@aol.com

Building citizen-based stewardship among diverse communities in support of wildlife and National Wildlife Refuges. Partner to the National Wildlife Refuges of the San Francisco Bay Region. Project of Acterra: Action for a Sustainable Earth.

DEPARTMENT OF THE AIR FORCE
129TH RESCUE WING (ANG)
CALIFORNIA AIR NATIONAL GUARD
MOFFETT FEDERAL AIRFIELD, CA

6-Feb-06

MEMORANDUM FOR Ms. Yvonne LeTellier, Project Manager
U.S. Army Corps of Engineers
333 Market Street, 8th Floor
San Francisco, California 94105-2197
THROUGH: COL BAGDASARIAN

FROM: 129 RQW/SE

SUBJECT: Public comment for the Interim Feasibility Study of the South San Francisco Bay Shoreline Study

1. Representing the California Air National Guard and the 129th Rescue Wing, I attended the public scoping meeting held on 25 Jan 06 to verbally offer comments on the joint Environmental Impact Statement (EIS)/Environmental Impact Report (EIR) Feasibility Report, hereafter called the Report. The purpose of this memorandum is to formalize and expand on those comments to the three lead agencies drafting the Report -- U.S. Army Corps of Engineers (Corps), U.S. Fish and Wildlife Services (USFWS), and California State Coastal Conservancy (SCC).

2. As users of Moffett Federal Airfield, we are very concerned about any project that may impact the safety of the environment surrounding Moffett. Our specific concern here lies in how wetland restoration could increase the hazard associated with aircraft striking birds in close proximity to the airfield. We wish to call the Corps and USFWS attention to the attached FAA Advisory Circular regarding "Hazardous Wildlife Attractants on or Near Airports" (AC No: 150/5200-33A, July 27, 2004), hereafter called the AC. Following the guidance laid out in CFR 139, the AC designates a 10,000 foot perimeter around airfields such as Moffett which serve turbine-powered aircraft within which "hazardous wildlife attractants should be avoided, eliminated, or mitigated." We believe that a wetlands restoration effort in close proximity to Moffett can be pursued in a safe, sensible manner simultaneously mitigating wildlife hazards to aircraft while achieving the stated project goals of "flood protection and/or ecosystem restoration."

3. In drafting the Report, we urge the Corps, USFWS, and SCC to consult with experts on how best to restore the wetlands near Moffett while taking aviation safety into consideration. To that end, the Corps and USFWS should consult with U.S. Department of Agriculture (USDA) Wildlife Services or other wildlife damage management biologists as suggested in the AC. Last month a team of Air Force wildlife biologists conducted a review of wildlife hazard conditions at Moffett. During their visit these experts informally offered some recommendations on how to achieve wetlands restoration while simultaneously eliminating all hazardous bird attractants within the 10,000 foot separation zone. While we recognize that drafting the Report will require you to retain experts of your own, we offer the following recommendations in the interest of aviation safety.

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d. Ensure there is no exposed high ground amid open water within the two-mile zone where evening roost of gulls, cormorants, pelicans and other species may occur. This will require exploring the option of eliminating all levees within the two-mile separation zone.

THAT OTHERS MAY LIVE

e. Construct no boardwalks, poles, markers etc in the salt marsh that will attract perching and roosting birds within the separation zone.

4. I trust that this provides adequate detail on the concerns of the Air National Guard in this matter. We welcome the opportunity to work with the Corps and the USFWS going forward in the drafting of the Report. Any questions on this letter should be addressed to the 129th Rescue Wing Safety Office at SE.129RQW@camoff.ang.af.mil.

JEFFREY WALDMAN, Major, CA ANG
Chief of Safety

Attachment:
FAA Advisory Circular: "Hazardous Wildlife Attractants on or Near Airports"

cc: Dr. Steven Zornetzer, Deputy Director, NASA Ames Research Center
Maj Dwight Robinson, US Army, AFDD Flight Projects Office Chief

1st Ind, Wing/CC, 6-Feb-06

MEMORANDUM FOR Ms. Yvonne LeTellier, Project Manager, US Army Corps of Engineers

I sincerely hope the Corps, USFWS and SCC take aviation safety concerns into consideration when drafting the Report. I can only speak for my organization, but I suspect that the myriad of agencies which rely on Moffett FAF as a resource share in these concerns. I look forward to hearing how the Corps and USFWS plan to incorporate aviation safety into the South Bay Salt Pond Restoration Project.

AMOS BAGDASARIAN, Colonel, CA ANG
Wing Commander

U.S. Department
of Transportation

**Federal Aviation
Administration**

Advisory Circular

Subject: HAZARDOUS WILDLIFE ATTRACTANTS ON OR NEAR AIRPORTS

Date: July 27, 2004
Initiated by: AAS-300

AC No: 150/5200-33A
Change:

1. PURPOSE. This Advisory Circular (AC) provides guidance on certain land uses that have the potential to attract hazardous wildlife on or near public-use airports. It also discusses airport development projects (including airport construction, expansion, and renovation) affecting aircraft movement near hazardous wildlife attractants. Appendix 1 provides definitions of terms used in this AC.

2. APPLICABILITY. The Federal Aviation Administration (FAA) recommends that public-use airport operators implement the standards and practices contained in this AC. The holders of Airport Operating Certificates issued under Title 14, Code of Federal Regulations (CFR), Part 139, Certification of Airports, Subpart D (Part 139), may use the standards, practices, and recommendations contained in this AC to comply with the wildlife hazard management requirements of Part 139. Airports that have received Federal grant-in-aid assistance must use these standards. The FAA also recommends the guidance in this AC for land-use planners, operators of non-certificated airports, and developers of projects, facilities, and activities on or near airports.

3. CANCELLATION. This AC cancels AC 150/5200-33, *Hazardous Wildlife Attractants on or near Airports*, dated May 1, 1997.

4. PRINCIPAL CHANGES. This AC contains the following major changes:

a. Reorganized outline of the AC.
b. Expanded Table 1 to include updated information from the *Special Report for the FAA, "Ranking the Hazard Level of Wildlife Species to Civil Aviation in the USA: Update #1, July 2, 2003"*.
c. Removed Table 2, which outlined the distances between certain airport features and any on-airport agricultural crops, and relocated the discussion of on-airport agricultural activities to Paragraph 2-6.
d. Added text about the basis for separation distances between wildlife hazards and airport movement areas and added Figure 1 depicting the separation distances.
e. Added options for wetland mitigation for impacts from airport projects, including mitigation banking.
f. Further recognized the importance of the Wildlife Hazard Management Plan (WHMP).

5. BACKGROUND. Information about the risks posed to aircraft by certain wildlife species has increased a great deal in recent years. Improved reporting, studies, documentation, and statistics clearly show that aircraft collisions with birds and other wildlife are a serious economic and public safety problem. While many species of wildlife can pose a threat to aircraft safety, they are not equally hazardous. Table 1 ranks the wildlife groups commonly involved in damaging strikes in the United States according to their relative hazard to aircraft. The ranking is based on the 47,212 records in the FAA National Wildlife Strike Database for the years 1990 through 2003. These hazard rankings, in conjunction with site-specific WHAs, will help airport operators determine the relative abundance and use patterns of wildlife species and help focus hazardous wildlife management efforts on those species most likely to cause problems at an airport.

Most public-use airports have large tracts of open, undeveloped land that provide added margins of safety and noise mitigation. These areas can also present potential hazards to aviation if they encourage wildlife to enter an airport's approach or departure airspace or air operations area (AOA). Constructed or natural areas—such as poorly drained locations, detention/retention ponds, roosting habitats on buildings, landscaping, odor-causing rotting organic matter (putrescible waste) disposal operations, wastewater treatment plants, agricultural or aquaculture activities, surface mining, or wetlands—can provide wildlife with ideal locations for feeding, loafing, reproduction, and escape. Even small facilities, such as fast food restaurants, taxicab staging areas, rental car facilities, aircraft viewing areas, and public parks, can produce substantial attractions for hazardous wildlife.

During the past century, wildlife-aircraft strikes have resulted in the loss of hundreds of lives worldwide, as well as billions of dollars in aircraft damage. Hazardous wildlife attractants on and near airports can jeopardize future airport expansion, making proper community land-use planning essential. This AC provides airport operators and those parties with whom they cooperate with the guidance they need to assess and address potentially hazardous wildlife attractants when locating new facilities and implementing certain land-use practices on or near public-use airports.

6. **MEMORANDUM OF AGREEMENT BETWEEN FEDERAL RESOURCE AGENCIES.** The FAA, the U.S. Air Force, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, and the U.S. Department of Agriculture - Wildlife Services signed a Memorandum of Agreement (MOA) (final signature July 2003) to acknowledge their respective missions in protecting aviation from wildlife hazards. Through the MOA, the agencies established procedures necessary to coordinate their missions to address more effectively existing and future environmental conditions contributing to collisions between wildlife and aircraft (wildlife strikes) throughout the United States. These efforts are intended to minimize wildlife risks to aviation and human safety while protecting the Nation's valuable environmental resources.

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Director, Office of Airport Safety
and Standards

Table 1. Ranking of 25 species groups as to relative hazard to aircraft (1=most hazardous) based on three criteria (damage, major damage, and effect-on-flight), a composite ranking based on all three rankings, and a relative hazard score. Data were derived from the FAA National Wildlife Strike Database, January 1990–April 2003.[1]

Species group	Ranking by criteria			Composite ranking[2]	Relative hazard score[3]
	Damage[4]	Major damage[5]	Effect on flight[6]		
Deer	1	1	1	1	100
Vultures	2	2	2	2	64
Geese	3	3	6	3	55
Cormorants/pelicans	4	5	3	4	54
Cranes	7	6	4	5	47
Eagles	6	9	7	6	41
Ducks	5	8	10	7	39
Osprey	8	4	8	8	39
Turkey/pheasants	9	7	11	9	33
Herons	11	14	9	10	27
Hawks (buteos)	10	12	12	11	25
Gulls	12	11	13	12	24
Rock pigeon	13	10	14	13	23
Owls	14	13	20	14	23
H. lark/s. bunting	18	15	15	15	17
Crows/ravens	15	16	16	16	16
Coyote	16	19	5	17	14
Mourning dove	17	17	17	18	14
Shorebirds	19	21	18	19	10
Blackbirds/starling	20	22	19	20	10
American kestrel	21	18	21	21	9
Meadowlarks	22	20	22	22	7
Swallows	24	23	24	23	4
Sparrows	25	24	23	24	4
Nighthawks	23	25	25	25	1

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[1] Excerpted from the *Special Report for the FAA, "Ranking the Hazard Level of Wildlife Species to Civil Aviation in the USA: Update #1, July 2, 2003"*. Refer to this report for additional explanations of criteria and method of ranking.

[2] Relative rank of each species group was compared with every other group for the three variables, placing the species group with the greatest hazard rank for ≥ 2 of the 3 variables above the next highest ranked group, then proceeding down the list.

[3] Percentage values, from Tables 3 and 4 in Footnote 1 of the *Special Report*, for the three criteria were summed and scaled down from 100, with 100 as the score for the species group with the maximum summed values and the greatest potential hazard to aircraft.

[4] Aircraft incurred at least some damage (destroyed, substantial, minor, or unknown) from strike.

[5] Aircraft incurred damage or structural failure, which adversely affected the structure strength, performance, or flight characteristics, and which would normally require major repair or replacement of the affected component, or the damage sustained makes it inadvisable to restore aircraft to airworthy condition.

[6] Aborted takeoff, engine shutdown, precautionary landing, or other.

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SECTION 1. GENERAL SEPARATION CRITERIA FOR HAZARDOUS WILDLIFE ATTRACTANTS ON OR NEAR AIRPORTS.

1-1.INTRODUCTION. When considering proposed land uses, airport operators, local planners, and developers must take into account whether the proposed land uses, including new development projects, will increase wildlife hazards. Land-use practices that attract or sustain hazardous wildlife populations on or near airports can significantly increase the potential for wildlife strikes.

The FAA recommends the minimum separation criteria outlined below for land-use practices that attract hazardous wildlife to the vicinity of airports. Please note that FAA criteria include land uses that cause movement of hazardous wildlife onto, into, or across the airport's approach or departure airspace or air operations area (AOA). (See the discussion of the synergistic effects of surrounding land uses in Section 2-8 of this AC.)

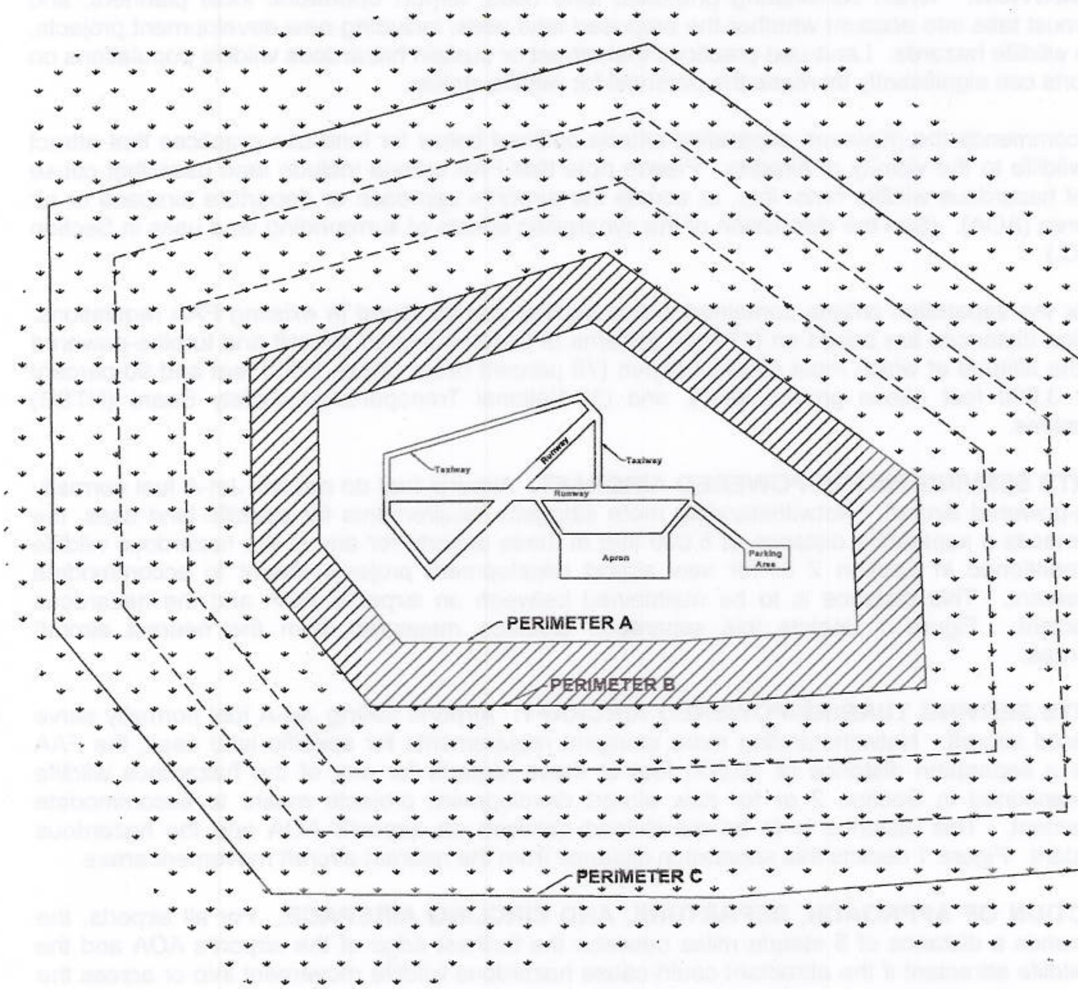
The basis for the separation criteria contained in this section can be found in existing FAA regulations. The separation distances are based on (1) flight patterns of piston-powered aircraft and turbine-powered aircraft, (2) the altitude at which most strikes happen (78 percent occur under 1,000 feet and 90 percent occur under 3,000 feet above ground level), and (3) National Transportation Safety Board (NTSB) recommendations.

1-2.AIRPORTS SERVING PISTON-POWERED AIRCRAFT. Airports that do not sell Jet-A fuel normally serve piston-powered aircraft. Notwithstanding more stringent requirements for specific land uses, the FAA recommends a separation distance of 5,000 feet at these airports for any of the hazardous wildlife attractants mentioned in Section 2 or for new airport development projects meant to accommodate aircraft movement. This distance is to be maintained between an airport's AOA and the hazardous wildlife attractant. Figure 1 depicts this separation distance measured from the nearest aircraft operations areas.

1-3.AIRPORTS SERVING TURBINE-POWERED AIRCRAFT. Airports selling Jet-A fuel normally serve turbine-powered aircraft. Notwithstanding more stringent requirements for specific land uses, the FAA recommends a separation distance of 10,000 feet at these airports for any of the hazardous wildlife attractants mentioned in Section 2 or for new airport development projects meant to accommodate aircraft movement. This distance is to be maintained between an airport's AOA and the hazardous wildlife attractant. Figure 1 depicts this separation distance from the nearest aircraft movement areas.

1-4.PROTECTION OF APPROACH, DEPARTURE, AND CIRCLING AIRSPACE. For all airports, the FAA recommends a distance of 5 statute miles between the farthest edge of the airport's AOA and the hazardous wildlife attractant if the attractant could cause hazardous wildlife movement into or across the approach or departure airspace.

Figure 1. Separation distances within which hazardous wildlife attractants should be avoided, eliminated, or mitigated.



PERIMETER A:
For airports serving piston-powered aircraft, hazardous wildlife attractants must be 5,000 feet from the nearest air operations area.

PERIMETER B:
For airports serving turbine-powered aircraft, hazardous wildlife attractants must be 10,000 feet from the nearest air operations area.

PERIMETER C:
5-mile range to protect approach, departure and circling airspace.

SECTION 2. LAND-USE PRACTICES ON OR NEAR AIRPORTS THAT POTENTIALLY ATTRACT HAZARDOUS WILDLIFE.

2-1.GENERAL. The wildlife species and the size of the populations attracted to the airport environment vary considerably, depending on several factors, including land-use practices on or near the airport. This section discusses land-use practices having the potential to attract hazardous wildlife and threaten aviation safety. In addition to the specific considerations outlined below, airport operators should refer to *Wildlife Hazard Management at Airports,* prepared by FAA and U.S. Department of Agriculture (USDA) staff. (This manual is available in English, Spanish, and French. It can be viewed and downloaded free of charge from the FAA's wildlife hazard mitigation web site: http://wildlife-mitigation.tc.faa.gov.). And, *Prevention and Control of Wildlife Damage,* compiled by the University of Nebraska Cooperative Extension Division. (This manual is available online in a periodically updated version at: ianrwww.unl.edu/wildlife/solutions/handbook/.)

2-2.WASTE DISPOSAL OPERATIONS. Municipal solid waste landfills (MSWLs) are known to attract large numbers of hazardous wildlife, particularly birds. Because of this, these operations, when located within the separations identified in the siting criteria in Sections 1-2 through 1-4, are considered incompatible with safe airport operations.

a. **Siting for new municipal solid waste landfills subject to AIR 21.** Section 503 of the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (Public Law 106-181) (AIR 21) prohibits the construction or establishment of a new MSWL within 6 statute miles of certain public-use airports. Before these prohibitions apply, both the airport and the landfill must meet the very specific conditions described below. These restrictions do not apply to airports or landfills located within the state of Alaska.

The airport must (1) have received a Federal grant(s) under 49 U.S.C. § 47101, et. seq.; (2) be under control of a public agency; (3) serve some scheduled air carrier operations conducted in aircraft with less than 60 seats; and (4) have total annual enplanements consisting of at least 51 percent of scheduled air carrier enplanements conducted in aircraft with less than 60 passenger seats.

The proposed MSWL must (1) be within 6 miles of the airport, as measured from airport property line to MSWL property line, and (2) have started construction or establishment on or after April 5, 2001. Public Law 106-181 only limits the construction or establishment of some new MSWLs. It does not limit the expansion, either vertical or horizontal, of existing landfills.

NOTE: Consult the most recent version of AC 150/5200-34, *Construction or Establishment of Landfills Near Public Airports,* for a more detailed discussion of these restrictions.

b. **Siting for new MSWLs not subject to AIR 21.** If an airport and MSWL do not meet the restrictions of Public Law 106-181, the FAA recommends against locating MSWLs within the separation distances identified in Sections 1-2 through 1-4. The separation distances should be measured from the closest point of the airport's AOA to the closest planned MSWL cell.

c. **Considerations for existing waste disposal facilities within the limits of separation criteria.** The FAA recommends against airport development projects that would increase the number of aircraft operations or accommodate larger or faster aircraft near MSWL operations located within the separations identified in Sections 1-2 through 1-4. In addition, in accordance with 40 CFR 258.10, owners or operators of existing MSWL units that are located within the separations listed in Sections 1-2 through 1-4 must demonstrate that the unit is designed and operated so it does not pose a bird hazard to aircraft. (See Sections 4-3(b) and 4-3(c) of this AC for a discussion of this demonstration requirement.)

d. **Enclosed trash transfer stations.** Enclosed waste-handling facilities that receive garbage behind closed doors; process it via compaction, incineration, or similar manner; and remove all residue by enclosed vehicles generally are compatible with safe airport operations, provided they are not located on airport property or within the Runway Protection Zone (RPZ). These facilities should not handle or store putrescible waste outside or in a partially enclosed structure accessible to hazardous wildlife. Trash transfer facilities that are open on one or more sides; that store uncovered quantities of municipal solid waste outside, even if only for a short time; that use semi-trailers that leak or have trash clinging to the outside; or that do not control odors by ventilation and filtration systems (odor masking is not acceptable) do not meet the FAA's definition of fully enclosed trash transfer stations. The FAA considers these facilities incompatible with safe airport operations if they are located closer than the separation distances specified in Sections 1-2 through 1-4.

e. **Composting operations on or near airport property.** Composting operations that accept only yard waste (e.g., leaves, lawn clippings, or branches) generally do not attract hazardous wildlife. Sewage sludge, woodchips, and similar material are not municipal solid wastes and may be used as compost bulking agents. The compost, however, must never include food or other municipal solid waste. Composting operations should not be located on airport property. Off-airport property composting operations should be located no closer than the greater of the following distances: 1,200 feet from any AOA or the distance called for by airport design requirements (see AC 150/5300-13, *Airport Design*). This spacing should prevent material, personnel, or equipment from penetrating any Object Free Area (OFA), Obstacle Free Zone (OFZ), Threshold Siting Surface (TSS), or Clearway. Airport operators should monitor composting operations located in proximity to the airport to ensure that steam or thermal rise does not adversely affect air traffic. On-airport disposal of compost by-products should not be conducted for the reasons stated in 2-3f.

f. **Underwater waste discharges.** The FAA recommends against the underwater discharge of any food waste (e.g., fish processing offal) within the separations identified in Sections 1-2 through 1-4 because it could attract scavenging hazardous wildlife.

g. **Recycling centers.** Recycling centers that accept previously sorted non-food items, such as glass, newspaper, cardboard, or aluminum, are, in most cases, not attractive to hazardous wildlife and are acceptable.

h. **Construction and demolition (C&D) debris facilities.** C&D landfills do not generally attract hazardous wildlife and are acceptable if maintained in an orderly manner, admit no putrescible waste, and are not co-located with other waste disposal operations. However, C&D landfills have similar visual and operational characteristics to putrescible waste disposal sites. When co-located with putrescible waste disposal operations, C&D landfills are more likely to attract hazardous wildlife because of the similarities between these disposal facilities. Therefore, a C&D landfill co-located with another waste disposal operation should be located outside of the separations identified in Sections 1-2 through 1-4.

i. **Fly ash disposal.** The incinerated residue from resource recovery power/heat-generating facilities that are fired by municipal solid waste, coal, or wood is generally not a wildlife attractant because it no longer contains putrescible matter. Landfills accepting only fly ash are generally not considered to be wildlife attractants and are acceptable as long as they are maintained in an orderly manner, admit no putrescible waste of any kind, and are not co-located with other disposal operations that attract hazardous wildlife.

Since varying degrees of waste consumption are associated with general incineration (not resource recovery power/heat-generating facilities), the FAA considers the ash from general incinerators a regular waste disposal by-product and, therefore, a hazardous wildlife attractant if disposed of within the separation criteria outlined in Sections 1-2 through 1-4.

2-3. WATER MANAGEMENT FACILITIES. Drinking water intake and treatment facilities, stormwater and wastewater treatment facilities, associated retention and settling ponds, ponds built for recreational use, and ponds that result from mining activities often attract large numbers of potentially hazardous wildlife. To prevent wildlife hazards, land-use developers and airport operators may need to develop management plans, in compliance with local and state regulations, to support the operation of stormwater management facilities on or near all public-use airports to ensure a safe airport environment.

a. **Existing stormwater management facilities.** On-airport stormwater management facilities allow the quick removal of surface water, including discharges related to aircraft deicing, from impervious surfaces, such as pavement and terminal/hangar building roofs. Existing on-airport detention ponds collect stormwater, protect water quality, and control runoff. Because they slowly release water after storms, they create standing bodies of water that can attract hazardous wildlife. Where the airport has developed a WHMP in accordance with Part 139, the FAA requires immediate correction of any wildlife hazards arising from existing stormwater facilities located on or near airports, using appropriate wildlife hazard mitigation techniques. Airport operators should develop measures to minimize hazardous wildlife attraction in consultation with a wildlife damage management biologist.

Where possible, airport operators should modify stormwater detention ponds to allow a maximum 48-hour detention period for the design storm. The FAA recommends that airport operators avoid or remove retention ponds and detention ponds featuring dead storage to eliminate standing water. Detention basins should remain totally dry between rainfalls. Where constant flow of water is anticipated through the basin, or where any portion of the basin bottom may remain wet, the detention facility should include a concrete or paved pad and/or ditch/swale in the bottom to prevent vegetation that may provide nesting habitat.

When it is not possible to drain a large detention pond completely, airport operators may use physical barriers, such as bird balls, wires grids, pillows, or netting, to deter birds and other hazardous wildlife. When physical barriers are used, airport operators must evaluate their use and ensure they will not adversely affect water rescue. Before installing any physical barriers over detention ponds on Part 139 airports, airport operators must get approval from the appropriate FAA Regional Airports Division Office.

The FAA recommends that airport operators encourage off-airport stormwater treatment facility operators to incorporate appropriate wildlife hazard mitigation techniques into stormwater treatment facility operating practices when their facility is located within the separation criteria specified in Sections 1-2 through 1-4.

b. **New stormwater management facilities.** The FAA strongly recommends that off-airport stormwater management systems located within the separations identified in Sections 1-2 through 1-4 be designed and operated so as not to create above-ground standing water. On-airport stormwater detention ponds should be designed, engineered, constructed, and maintained for a maximum 48–hour detention period for the design storm and remain completely dry between storms. To facilitate the control of hazardous wildlife, the FAA recommends the use of steep-sided, narrow, linearly shaped water detention basins. When it is not possible to place these ponds away from an airport's AOA, airport operators should use physical barriers, such as bird balls, wires grids, pillows, or netting, to prevent access of hazardous wildlife to open water and minimize aircraft-wildlife interactions. When physical barriers are used, airport operators must evaluate their use and ensure they will not adversely affect water rescue. Before installing any physical barriers over detention ponds on Part 139 airports, airport operators must get approval from the appropriate FAA Regional Airports Division Office. All vegetation in or around detention basins that provide food or cover for hazardous wildlife should be eliminated. If soil conditions and other requirements allow, the FAA encourages the use of underground stormwater infiltration systems, such as French drains or buried rock fields, because they are less attractive to wildlife.

c. **Existing wastewater treatment facilities.** The FAA strongly recommends that airport operators immediately correct any wildlife hazards arising from existing wastewater treatment facilities located on or near the airport. Where required, a WHMP developed in accordance with Part 139 will outline appropriate wildlife hazard mitigation techniques. Accordingly, airport operators should encourage wastewater treatment facility operators to incorporate measures, developed in consultation with a wildlife damage management biologist, to minimize hazardous wildlife attractants. Airport operators should also encourage those wastewater treatment facility operators to incorporate these mitigation techniques into their standard operating practices. In addition, airport operators should consider the existence of wastewater treatment facilities when evaluating proposed sites for new airport development projects and avoid such sites when practicable.

d. **New wastewater treatment facilities.** The FAA strongly recommends against the construction of new wastewater treatment facilities or associated settling ponds within the separations identified in Sections 1-2 through 1-4. Appendix 1 defines wastewater treatment facility as "any devices and/or systems used to store, treat, recycle, or reclaim municipal sewage or liquid industrial wastes." The definition includes any pretreatment involving the reduction of the amount of pollutants or the elimination of pollutants prior to introducing such pollutants into a publicly owned treatment works (wastewater treatment facility). During the site-location analysis for wastewater treatment facilities, developers should consider the potential to attract hazardous wildlife if an airport is in the vicinity of the proposed site, and airport operators should voice their opposition to such facilities if they are in proximity to the airport.

e. **Artificial marshes.** In warmer climates, wastewater treatment facilities sometimes employ artificial marshes and use submergent and emergent aquatic vegetation as natural filters. These artificial marshes may be used by some species of flocking birds, such as blackbirds and waterfowl, for breeding or roosting activities. The FAA strongly recommends against establishing artificial marshes within the separations identified in Sections 1-2 through 1-4.

f. **Wastewater discharge and sludge disposal.** The FAA recommends against the discharge of wastewater or sludge on airport property because it may improve soil moisture and quality on unpaved areas and lead to improved turf growth that can be an attractive food source for many species of animals. Also, the turf requires more frequent mowing, which in turn may mutilate or flush insects or small animals and produce straw, both of which can attract hazardous wildlife. In addition, the improved turf may attract grazing wildlife, such as deer and geese. Problems may also occur when discharges saturate unpaved airport areas. The resultant soft, muddy conditions can severely restrict or prevent emergency vehicles from reaching accident sites in a timely manner.

2-4. WETLANDS. Wetlands provide a variety of functions and can be regulated by local, state, and Federal laws. Normally, wetlands are attractive to many types of wildlife, including many which rank high on the list of hazardous wildlife species (Table 1).

NOTE: If questions exist as to whether an area qualifies as a wetland, contact the local division of the U.S. Army Corps of Engineers, the Natural Resources Conservation Service, or a wetland consultant qualified to delineate wetlands.

a. **Existing wetlands on or near airport property.** If wetlands are located on or near airport property, airport operators should be alert to any wildlife use or habitat changes in these areas that could affect safe aircraft operations. At public-use airports, the FAA recommends immediately correcting, in cooperation with local, state, and Federal regulatory agencies, any wildlife hazards arising from existing wetlands located on or near airports. Where required, a WHMP will outline appropriate wildlife hazard mitigation techniques. Accordingly, airport operators should develop measures to minimize hazardous wildlife attraction in consultation with a wildlife damage management biologist.

b. **New airport development.** Whenever possible, the FAA recommends locating new airports using the separations from wetlands identified in Sections 1-2 through 1-4. Where alternative sites are not practicable, or when airport operators are expanding an existing airport into or near wetlands, a wildlife damage management biologist, in consultation with the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and the state wildlife management agency should evaluate the wildlife hazards and prepare a WHMP that indicates methods of minimizing the hazards.

c. **Mitigation for wetland impacts from airport projects.** Wetland mitigation may be necessary when unavoidable wetland disturbances result from new airport development projects or projects required to correct wildlife hazards from wetlands. Wetland mitigation must be designed so it does not create a wildlife hazard. The FAA recommends that wetland mitigation projects that may attract hazardous wildlife be sited outside of the separations identified in Sections 1-2 through 1-4.

(1) Onsite mitigation of wetland functions. The FAA may consider exceptions to locating mitigation activities outside the separations identified in Sections 1-2 through 1-4 if the affected wetlands provide unique ecological functions, such as critical habitat for threatened or endangered species or ground water recharge, which cannot be replicated when moved to a different location. Using existing airport property is sometimes the only feasible way to achieve the mitigation ratios mandated in regulatory orders and/or settlement agreements with the resource agencies. Conservation easements are an additional means of providing mitigation for project impacts. Typically the airport operator continues to own the property, and an easement is created stipulating that the property will be maintained as habitat for state or Federally listed species.

Mitigation must not inhibit the airport operator's ability to effectively control hazardous wildlife on or near the mitigation site or effectively maintain other aspects of safe airport operations. Enhancing such mitigation areas to attract hazardous wildlife must be avoided. The FAA will review any onsite mitigation proposals to determine compatibility with safe airport operations. A wildlife damage management biologist should evaluate any wetland mitigation projects that are needed to protect unique wetland functions and that must be located in the separation criteria in Sections 1-2 through 1-4 before the mitigation is implemented. A WHMP should be developed to reduce the wildlife hazards.

(2) Offsite mitigation of wetland functions. The FAA recommends that wetland mitigation projects that may attract hazardous wildlife be sited outside of the separations identified in Sections 1-2 through 1-4 unless they provide unique functions that must remain onsite (see 2-4c(1)). Agencies that regulate impacts to or around wetlands recognize that it may be necessary to split wetland functions in mitigation schemes. Therefore, regulatory agencies may, under certain circumstances, allow portions of mitigation to take place in different locations.

(3) Mitigation banking. Wetland mitigation banking is the creation or restoration of wetlands in order to provide mitigation credits that can be used to offset permitted wetland losses. Mitigation banking benefits wetland resources by providing advance replacement for permitted wetland losses; consolidating small projects into larger, better-designed and managed units; and encouraging integration of wetland mitigation projects with watershed planning. This last benefit is most helpful for airport projects, as wetland impacts mitigated outside of the separations identified in Sections 1-2 through 1-4 can still be located within the same watershed. Wetland mitigation banks meeting the separation criteria offer an ecologically sound approach to mitigation in these situations. Airport operators should work with local watershed management agencies or organizations to develop mitigation banking for wetland impacts on airport property.

2-5.DREDGE SPOIL CONTAINMENT AREAS. The FAA recommends against locating dredge spoil containment areas (also known as Confined Disposal Facilities) within the separations identified in Sections 1-2 through 1-4 if the containment area or the spoils contain material that would attract hazardous wildlife.

2-6.AGRICULTURAL ACTIVITIES. Because most, if not all, agricultural crops can attract hazardous wildlife during some phase of production, the FAA recommends against the used of airport property for agricultural production, including hay crops, within the separations identified in Sections 1-2 through 1-4. . If the airport has no financial alternative to agricultural crops to produce income necessary to maintain the viability of the airport, then the airport shall follow the crop distance guidelines listed in the table titled "Minimum Distances between Certain Airport Features and Any On-Airport Agricultural Crops" found in AC 150/5300-13, *Airport Design*, Appendix 19. The cost of wildlife control and potential accidents should be weighed against the income produced by the on-airport crops when deciding whether to allow crops on the airport.

a. **Livestock production.** Confined livestock operations (i.e., feedlots, dairy operations, hog or chicken production facilities, or egg laying operations) often attract flocking birds, such as starlings, that pose a hazard to aviation. Therefore, The FAA recommends against such facilities within the separations identified in Sections 1-2 through 1-4. Any livestock operation within these separations should have a program developed to reduce the attractiveness of the site to species that are hazardous to aviation safety. Free-ranging livestock must not be grazed on airport property because the animals may wander onto the AOA. Furthermore, livestock feed, water, and manure may attract birds.

b. **Aquaculture.** Aquaculture activities (i.e. catfish or trout production) conducted outside of fully enclosed buildings are inherently attractive to a wide variety of birds. Existing aquaculture facilities/activities within the separations listed in Sections 1-2 through 1-4 must have a program developed to reduce the attractiveness of the sites to species that are hazardous to aviation safety. Airport operators should also oppose the establishment of new aquaculture facilities/activities within the separations listed in Sections 1-2 through 1-4.

c. **Alternative uses of agricultural land.** Some airports are surrounded by vast areas of farmed land within the distances specified in Sections 1-2 through 1-4. Seasonal uses of agricultural land for activities such as hunting can create a hazardous wildlife situation. In some areas, farmers will rent their land for hunting purposes. Rice farmers, for example, flood their land during waterfowl hunting season and obtain additional revenue by renting out duck blinds. The duck hunters then use decoys and call in hundreds, if not thousands, of birds, creating a tremendous threat to aircraft safety. A wildlife damage management biologist should review, in coordination with local farmers and producers, these types of seasonal land uses and incorporate them into the WHMP.

2-7.GOLF COURSES, LANDSCAPING AND OTHER LAND-USE CONSIDERATIONS.

a. **Golf courses.** The large grassy areas and open water found on most golf courses are attractive to hazardous wildlife, particularly Canada geese and some species of gulls. These species can pose a threat to aviation safety. The FAA recommends against construction of new golf courses within the separations identified in Sections 1-2 through 1-4. Existing golf courses located within these separations must develop a program to reduce the attractiveness of the sites to species that are hazardous to aviation safety. Airport operators should ensure these golf courses are monitored on a continuing basis for the presence of hazardous wildlife. If hazardous wildlife is detected, corrective actions should be immediately implemented.

b. **Landscaping and landscape maintenance.** Depending on its geographic location, landscaping can attract hazardous wildlife. The FAA recommends that airport operators approach landscaping with caution and confine it to airport areas not associated with aircraft movements. A wildlife damage management biologist should review all landscaping plans. Airport operators should also monitor all landscaped areas on a continuing basis for the presence of hazardous wildlife. If hazardous wildlife is detected, corrective actions should be immediately implemented.

Turf grass areas can be highly attractive to a variety of hazardous wildlife species. Research conducted by the USDA Wildlife Services' National Wildlife Research Center has shown that no one grass management regime will deter all species of hazardous wildlife in all situations. In cooperation with wildlife damage management biologist, airport operators should develop airport turf grass management plans on a prescription basis, depending on the airport's geographic locations and the type of hazardous wildlife likely to frequent the airport

Airport operators should ensure that plant varieties attractive to hazardous wildlife are not used on the airport. Disturbed areas or areas in need of re-vegetating should not be planted with seed mixtures containing millet or any other large-seed producing grass. For airport property already planted with seed mixtures containing millet, rye grass, or other large-seed producing grasses, the FAA recommends disking, plowing, or another suitable agricultural practice to prevent plant maturation and seed head production. Plantings should follow the specific recommendations for grass management and seed and plant selection made by the State University Cooperative Extension Service, the local office of Wildlife Services, or a qualified wildlife damage management biologist. Airport operators should also consider developing and implementing a preferred/prohibited plant species list, reviewed by a wildlife damage management biologist, which has been designed for the geographic location to reduce the attractiveness to hazardous wildlife for landscaping airport property.

c. **Airports surrounded by wildlife habitat.** The FAA recommends that operators of airports surrounded by woodlands, water, or wetlands refer to Section 2.4 of this AC. Operators of such airports should provide for a WHA conducted by a wildlife damage management biologist. This WHA is the first step in preparing a WHMP, where required.

d. **Other hazardous wildlife attractants.** Other specific land uses or activities (e.g., sport or commercial fishing, shellfish harvesting, etc.), perhaps unique to certain regions of the country, have the potential to attract hazardous wildlife. Regardless of the source of the attraction, when hazardous wildlife is noted on a public-use airport, airport operators must take prompt remedial action(s) to protect aviation safety.

2-8. SYNERGISTIC EFFECTS OF SURROUNDING LAND USES. There may be circumstances where two (or more) different land uses that would not, by themselves, be considered hazardous wildlife attractants or that are located outside of the separations identified in Sections 1-2 through 1-4 that are in such an alignment with the airport as to create a wildlife corridor directly through the airport and/or surrounding airspace. An example of this situation may involve a lake located outside of the separation criteria on the east side of an airport and a large hayfield on the west side of an airport, land uses that together could create a flyway for Canada geese directly across the airspace of the airport. There are numerous examples of such situations; therefore, airport operators and the wildlife damage management biologist must consider the entire surrounding landscape and community when developing the WHMP.

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SECTION 3. PROCEDURES FOR WILDLIFE HAZARD MANAGEMENT BY OPERATORS OF PUBLIC-USE AIRPORTS.

3.1. INTRODUCTION. In recognition of the increased risk of serious aircraft damage or the loss of human life that can result from a wildlife strike, the FAA may require the development of a Wildlife Hazard Management Plan (WHMP) when specific triggering events occur on or near the airport. Part 139.337 discusses the specific events that trigger a Wildlife Hazard Assessment (WHA) and the specific issues that a WHMP must address for FAA approval and inclusion in an Airport Certification Manual.

3.2. COORDINATION WITH USDA WILDLIFE SERVICES OR OTHER QUALIFIED WILDLIFE DAMAGE MANAGEMENT BIOLOGISTS. The FAA will use the WHA conducted in accordance with Part 139 to determine if the airport needs a WHMP. Therefore, persons having the education, training, and expertise necessary to assess wildlife hazards must conduct the WHA. The airport operator may look to Wildlife Services or to qualified private consultants to conduct the WHA. When the services of a wildlife damage management biologist are required, the FAA recommends that land-use developers or airport operators contact a consultant specializing in wildlife damage management or the appropriate state director of Wildlife Services.

***NOTE**: Telephone numbers for the respective USDA Wildlife Services state offices can be obtained by contacting USDA Wildlife Services Operational Support Staff, 4700 River Road, Unit 87, Riverdale, MD, 20737-1234, Telephone (301) 734-7921, Fax (301) 734-5157 (http://www.aphis.usda.gov/ws/).*

3-3.WILDLIFE HAZARD MANAGEMENT AT AIRPORTS: A MANUAL FOR AIRPORT PERSONNEL. This manual, prepared by FAA and USDA Wildlife Services staff, contains a compilation of information to assist airport personnel in the development, implementation, and evaluation of WHMPs at airports. The manual includes specific information on the nature of wildlife strikes, legal authority, regulations, wildlife management techniques, WHAs, WHMPs, and sources of help and information. The manual is available in three languages: English, Spanish, and French. It can be viewed and downloaded free of charge from the FAA's wildlife hazard mitigation web site: http://wildlife-mitigation.tc.faa.gov/. This manual only provides a starting point for addressing wildlife hazard issues at airports. Hazardous wildlife management is a complex discipline and conditions vary widely across the United States. Therefore, qualified wildlife damage management biologists must direct the development of a WHMP and the implementation of management actions by airport personnel.

There are many other resources complementary to this manual for use in developing and implementing WHMPs. Several are listed in the manual's bibliography.

3-4.WILDLIFE HAZARD ASSESSMENTS, TITLE 14, CODE OF FEDERAL REGULATIONS, PART 139. Part 139.337(b) requires airport operators to conduct a Wildlife Hazard Assessment (WHA) when certain events occur on or near the airport. Part 139.337 (c) provides specific guidance as to what facts must be addressed in a WHA.

3-5.WILDLIFE HAZARD MANAGEMENT PLAN (WHMP). The FAA will consider the results of the WHA, along with the aeronautical activity at the airport and the views of the airport operator and airport users, in determining whether a formal WHMP is needed, in accordance with Part 139.337. If the FAA determines that a WHMP is needed, the airport operator must formulate and implement a WHMP, using the WHA as the basis for the plan.

The goal of an airport's Wildlife Hazard Management Plan is to minimize the risk to aviation safety, airport structures or equipment, or human health posed by populations of hazardous wildlife on and around the airport.

The WHMP must identify hazardous wildlife attractants on or near the airport and the appropriate wildlife damage management techniques to minimize the wildlife hazard. It must also prioritize the management measures.

3-6. LOCAL COORDINATION. The establishment of a Wildlife Hazards Working Group (WHWG) will facilitate the communication, cooperation, and coordination of the airport and its surrounding community necessary to ensure the effectiveness of the WHMP. The cooperation of the airport community is also necessary when new projects are considered. Whether on or off the airport, the input from all involved parties must be considered when a potentially hazardous wildlife attractant is being proposed. Airport operators should also incorporate public education activities with the local coordination efforts because some activities in the vicinity of your airport, while harmless under normal leisure conditions, can attract wildlife and present a danger to aircraft. For example, if public trails are planned near wetlands or in parks adjoining airport property, the public should know that feeding birds and other wildlife in the area may pose a risk to aircraft.

Airport operators should work with local and regional planning and zoning boards so as to be aware of proposed land-use changes, or modification of existing land uses, that could create hazardous wildlife attractants within the separations identified in Sections 1-2 through 1-4. Pay particular attention to proposed land uses involving creation or expansion of waste water treatment facilities, development of wetland mitigation sites, or development or expansion of dredge spoil containment areas. At the very least, airport operators must ensure they are on the notification list of the local planning board or equivalent review entity for all communities located within 5 miles of the airport, so they will receive notification of any proposed project and have the opportunity to review it for attractiveness to hazardous wildlife.

3-7.COORDINATION/NOTIFICATION OF AIRMEN OF WILDLIFE HAZARDS. If an existing land-use practice creates a wildlife hazard and the land-use practice or wildlife hazard cannot be immediately eliminated, airport operators must issue a Notice to Airmen (NOTAM) and encourage the land–owner or manager to take steps to control the wildlife hazard and minimize further attraction.

SECTION 4. FAA NOTIFICATION AND REVIEW OF PROPOSED LAND-USE PRACTICE CHANGES IN THE VICINITY OF PUBLIC USE AIRPORTS.

4-1. FAA REVIEW OF PROPOSED LAND-USE PRACTICE CHANGES IN THE VICINITY OF PUBLIC USE AIRPORTS.

a. The FAA discourages the development of waste disposal and other facilities, discussed in Section 2, located within the 5,000/10,000-foot criteria specified in Sections 1-2 through 1-4.

b. For projects that are located outside the 5,000/10,000-foot criteria but within 5 statute miles of the airport's AOA, the FAA may review development plans, proposed land-use changes, operational changes, or wetland mitigation plans to determine if such changes present potential wildlife hazards to aircraft operations. The FAA considers sensitive airport areas as those that lie under or next to approach or departure airspace. This brief examination should indicate if further investigation is warranted.

c. Where a wildlife damage management biologist has conducted a further study to evaluate a site's compatibility with airport operations, the FAA may use the study results to make a determination.

4-2. WASTE MANAGEMENT FACILITIES.

a. Notification of new/expanded project proposal. Section 503 of the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (Public Law 106-181) limits the construction or establishment of new MSWL within 6 statute miles of certain public use airports, when both the airport and the landfill meet very specific conditions. See Section 2-2 of this AC and AC 150/5200-34 for a more detailed discussion of these restrictions.

The Environmental Protection Agency (EPA) requires any MSWL operator proposing a new or expanded waste disposal operation within 5 statute miles of a runway end to notify the appropriate FAA Regional Airports Division Office and the airport operator of the proposal (40 CFR 258, *Criteria for Municipal Solid Waste Landfills*, Section 258.10, *Airport Safety*). The EPA also requires owners or operators of new MSWL units, or lateral expansions of existing MSWL units, that are located within 10,000 feet of any airport runway end used by turbojet aircraft, or within 5,000 feet of any airport runway end used only by piston-type aircraft, to demonstrate successfully that such units are not hazards to aircraft. (See 4-2.b below.)

When new or expanded MSWLs are being proposed near airports, MSWL operators must notify the airport operator and the FAA of the proposal as early as possible pursuant to 40 CFR 258.

b. Waste handling facilities within separations identified in Sections 1-2 through 1-4. To claim successfully that a waste-handling facility sited within the separations identified in Sections 1-2 through 1-4 does not attract hazardous wildlife and does not threaten aviation, the developer must establish convincingly that the facility will not handle putrescible material other than that as outlined in 2-2b. The FAA strongly recommends against any facility other than that as outlined in 2-2b (enclosed transfer stations). The FAA will use this information to determine if the facility will be a hazard to aviation.

c. Putrescible-Waste Facilities. In their effort to satisfy the EPA requirement, some putrescible-waste facility proponents may offer to undertake experimental measures to demonstrate that their proposed facility will not be a hazard to aircraft. To date, no such facility has been able to demonstrate an ability to reduce and sustain hazardous wildlife to levels that existed before the putrescible-waste landfill began operating. For this reason, demonstrations of experimental wildlife control measures may not be conducted in an airport's AOA.

4-3. OTHER LAND-USE PRACTICE CHANGES. As a matter of policy, the FAA encourages operators of public use airports who become aware of proposed land use practice changes that may attract hazardous wildlife within 5 statute miles of their airports to promptly notify the FAA. The FAA also encourages proponents of such land use changes to notify the FAA as early in the planning process as possible. Advanced notice affords the FAA an opportunity (1) to evaluate the effect of a particular land-use change on aviation safety and (2) to support efforts by the airport sponsor to restrict the use of land next to or near the airport to uses that are compatible with the airport.

The airport operator, project proponent, or land-use operator may use FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, or other suitable documents similar to FAA Form 7460-1 to notify the appropriate FAA Regional Airports Division Office. Project proponents can contact the appropriate FAA Regional Airports Division Office for assistance with the notification process.

It is helpful if the notification includes a 15-minute quadrangle map of the area identifying the location of the proposed activity. The land-use operator or project proponent should also forward specific details of the proposed land-use change or operational change or expansion. In the case of solid waste landfills, the information should include the type of waste to be handled, how the waste will be processed, and final disposal methods.

a. **Airports that have received Federal grant-in-aid assistance.** Airports that have received Federal grant-in-aid assistance are required by their grant assurances to take appropriate actions to restrict the use of land next to or near the airport to uses that are compatible with normal airport operations. The FAA recommends that airport operators to the extent practicable oppose off-airport land-use changes or practices within the separations identified in Sections 1-2 through 1-4 that may attract hazardous wildlife. Failure to do so may lead to noncompliance with applicable grant assurances. The FAA will not approve the placement of airport development projects pertaining to aircraft movement in the vicinity of hazardous wildlife attractants without appropriate mitigating measures. Increasing the intensity of wildlife control efforts is not a substitute for eliminating or reducing a proposed wildlife hazard. Airport operators should identify hazardous wildlife attractants and any associated wildlife hazards during any planning process for new airport development projects.

b. **Additional coordination.** If, after initial review by the FAA, questions remain about the existence of a wildlife hazard near an airport, airport operators should consult a wildlife damage management biologist. Such questions may be triggered by a history of wildlife strikes at the airport or the proximity of the airport to a wildlife refuge, body of water, or similar feature known to attract wildlife. Once identified, such questions require resolution prior to the project's implementation.

APPENDIX 1. DEFINITIONS OF TERMS USED IN THIS ADVISORY CIRCULAR.

1. **GENERAL.** This appendix provides definitions of terms used throughout this AC.

   1. **Air operations area.** Any area of an airport used or intended to be used for landing, takeoff, or surface maneuvering of aircraft. An air operations area includes such paved areas or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiways, or apron.
   2. **Airport operator.** The operator (private or public) or sponsor of a public-use airport.
   3. **Approach or departure airspace.** The airspace, within 5 statute miles of an airport, through which aircraft move during landing or takeoff.
   4. **Bird balls.** High-density plastic floating balls that can be used to cover ponds and prevent birds from using the sites.
   5. **Certificate holder.** The holder of an Airport Operating Certificate issued under Title 14, Code of Federal Regulations, Part 139.
   6. **Construct a new MSWL.** To begin to excavate, grade land, or raise structures to prepare a municipal solid waste landfill as permitted by the appropriate regulatory or permitting agency.
   7. **Detention ponds.** Storm water management ponds that hold storm water for short periods of time, a few hours to a few days.
   8. **Establish a new MSWL.** When the first load of putrescible waste is received on-site for placement in a prepared municipal solid waste landfill.
   9. **Fly ash.** The fine, sand-like residue resulting from the complete incineration of an organic fuel source. Fly ash typically results from the combustion of coal or waste used to operate a power generating plant.
   10. **General aviation aircraft.** Any civil aviation aircraft not operating under 14 CFR Part 119, Certification: Air Carriers and Commercial Operators.
   11. **Hazardous wildlife.** Species of wildlife (birds, mammals, reptiles), including feral animals and domesticated animals not under control, that are associated with aircraft strike problems, are capable of causing structural damage to airport facilities, or act as attractants to other wildlife that pose a strike hazard
   12. **Municipal Solid Waste Landfill (MSWL).** A publicly or privately owned discrete area of land or an excavation that receives household waste and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under 40 CFR § 257.2. An MSWL may receive other types wastes, such as commercial solid waste, non-hazardous sludge, small-quantity generator waste, and industrial solid waste, as defined under 40 CFR § 258.2. An MSWL can consist of either a stand alone unit or several cells that receive household waste.
   13. **New MSWL.** A municipal solid waste landfill that was established or constructed after April 5, 2001.
   14. **Piston-powered aircraft.** Fixed-wing aircraft powered by piston engines.

15. **Piston-use airport.** Any airport that does not sell Jet-A fuel for fixed-wing turbine-powered aircraft, and primarily serves fixed-wing, piston-powered aircraft. Incidental use of the airport by turbine-powered, fixed-wing aircraft would not affect this designation. However, such aircraft should not be based at the airport.

16. **Public agency.** A State or political subdivision of a State, a tax-supported organization, or an Indian tribe or pueblo (49 U.S.C. § 47102(15)).

17. **Public airport.** An airport used or intended to be used for public purposes that is under the control of a public agency; and of which the area used or intended to be used for landing, taking off, or surface maneuvering of aircraft is publicly owned (49 U.S.C. § 47102(16)).

18. **Putrescible waste.** Solid waste that contains organic matter capable of being decomposed by micro-organisms and of such a character and proportion as to be capable of attracting or providing food for birds (40 CFR §257.3-8).

19. **Putrescible-waste disposal operation.** Landfills, garbage dumps, underwater waste discharges, or similar facilities where activities include processing, burying, storing, or otherwise disposing of putrescible material, trash, and refuse.

20. **Retention ponds.** Storm water management ponds that hold water for several months.

21. **Runway protection zone (RPZ).** An area off the runway end to enhance the protection of people and property on the ground (see AC 150/5300-13). The dimensions of this zone vary with the airport design, aircraft, type of operation, and visibility minimum.

22. **Scheduled air carrier operation.** Any common carriage passenger-carrying operation for compensation or hire conducted by an air carrier or commercial operator for which the air carrier, commercial operator, or their representative offers in advance the departure location, departure time, and arrival location. It does not include any operation that is conducted as a supplemental operation under 14 CFR Part 119 or as a public charter operation under 14 CFR Part 380 (14 CFR § 119.3).

23. **Sewage sludge.** Any solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works. (40 CFR 257.2)

24. **Sludge.** Any solid, semi-solid, or liquid waste generated form a municipal, commercial or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect. (40 CFR 257.2)

25. **Solid waste.** Any garbage, refuse, sludge, from a waste treatment plant, water supply treatment plant or air pollution control facility and other discarded material, including, solid liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved materials in domestic sewage, or solid or dissolved material in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act, as amended (86 Stat. 880), or source, special nuclear, or by product material as defined by the Atomic Energy Act of 1954, as amended, (68 Stat. 923). (40 CFR 257.2)

26. **Turbine-powered aircraft.** Aircraft powered by turbine engines including turbojets and turboprops but excluding turbo-shaft rotary-wing aircraft.

27. **Turbine-use airport.** Any airport that sells Jet-A fuel for fixed-wing turbine-powered aircraft.

28. **Wastewater treatment facility.** Any devices and/or systems used to store, treat, recycle, or reclaim municipal sewage or liquid industrial wastes, including Publicly Owned Treatment Works (POTW), as defined by Section 212 of the Federal Water Pollution Control Act (P.L. 92-500) as amended by the Clean Water Act of 1977 (P.L. 95-576) and the Water Quality Act of 1987 (P.L. 100-4). This definition includes any pretreatment involving the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a POTW. (See 40 CFR Section 403.3 (o), (p), & (q)).

29. **Wildlife.** Any wild animal, including without limitation any wild mammal, bird, reptile, fish, amphibian, mollusk, crustacean, arthropod, coelenterate, or other invertebrate, including any part, product, egg, or offspring thereof (50 CFR 10.12, *Taking, Possession, Transportation, Sale, Purchase, Barter, Exportation, and Importation of Wildlife and Plants*). As used in this AC, wildlife includes feral animals and domestic animals out of the control of their owners (14 CFR Part 139, Certification of Airports).

30. **Wildlife attractants.** Any human-made structure, land-use practice, or human-made or natural geographic feature that can attract or sustain hazardous wildlife within the landing or departure airspace or the airport's AOA. These attractants can include architectural features, landscaping, waste disposal sites, wastewater treatment facilities, agricultural or aquaculture activities, surface mining, or wetlands.

31. **Wildlife hazard.** A potential for a damaging aircraft collision with wildlife on or near an airport.

32. **Wildlife strike.** A wildlife strike is deemed to have occurred when:
    a. A pilot reports striking 1 or more birds or other wildlife;
    b. Aircraft maintenance personnel identify aircraft damage as having been caused by a wildlife strike;
    c. Personnel on the ground report seeing an aircraft strike 1 or more birds or other wildlife;
    d. Bird or other wildlife remains, whether in whole or in part, are found within 200 feet of a runway centerline, unless another reason for the animal's death is identified;
    e. 5. The animal's presence on the airport had a significant negative effect on a flight (i.e., aborted takeoff, aborted landing, high-speed emergency stop, aircraft left pavement area to avoid collision with animal) (Transport Canada, Airports Group, *Wildlife Control Procedures Manual*, Technical Publication 11500E, 1994).

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REQUISITION AND INVOICE / SHIPPING DOCUMENT

Form Approved
OMB No 0704-0246
Expires Oct 31, 1991

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters, Directorate for information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project(0704-0246), Washington, DC 20503.

1. FROM: (Include Zip Code)
MSGT JOHNNY HUERTA PHONE: 650-603-9300
129RQW/LGTT 681 MACON ROAD,BLDG 681
MOFFETT FAF, CA 94035

2. TO:(Include Zip Code)

3. SHIP TO - MARK FOR
MS YVONNE LETELLIER PHONE: 415-977-8466
US ARMY CORPS
333 MARKET STREET 8TH FLOOR
SAN FRANCISCO, CA 94105

SHEET NO. 1
NO OF SHEETS 1
5. REQUISITION DATE 06FEB2006
6. REQUISITION NUMBER FB60416037X003XXX
7. DATE MATERIAL REQUIRED(YYMMDD) 06/02/07
8. PRIORITY 1
9. AUTHORITY OR PURPOSE DATED MATERIAL
10. SIGNATURE
11a. VOUCHER NUMBER & DATE(YYMMDD) MSGT JOHNNY HUERTA
b. 129RQW/LGTT
12. DATE SHIPPED (YYMMDD)
13. MODE OF SHIPMENT J
14. BILL OF LADING NUMBER
15. AIR MOVEMENT DESIGNATOR OR PORT REFERENCE NO.

4. APPROPRIATIONS SYMBOL AND SUBHEAD	OBJECT CLASS	EXPENDITURE ACCOUNT (From)	EXPENDITURE ACCOUNT (To)	CHARGEABLE ACTIVITY	BUREAU CONTROL ACTIVITY NO.	BUREAU CONTROL NO.	AMOUNT

ITEM NO. (a)	FEDERAL STOCK NUMBER, DESCRIPTION, AND CODING OF MATERIAL AND / OR SERVICES (b)	UNIT OF ISSUE (c)	QUANTITY REQUESTED (d)	SUPPLY ACTION (e)	TYPE CONTAINER (f)	CONTAINER NOS. (g)	UNIT PRICE (h)	TOTAL COST (i)
1	ENVELOPE, NNSN UNCLASSIFIED AND NONHAZARDOUS MATERIAL	EN	1				0	

16. TRANSPORTATION VIA MATS OR MSTS CHARGEABLE TO
17. SPECIAL HANDLING

18. CERTIFICATION OF SHIPMENT	TOTAL CONTAINERS	TYPE CONTAINER	DESCRIPTION	TOTAL WEIGHT	TOTAL CUBE
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CHECKED BY					
PACKED BY					
	1	EN	⟵ TOTAL ⟶	1	1

19. RECEIPT			
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QUANTITIES RECEIVED EXCEPT AS NOTED	DATE (YYMMDD)	BY	GRAND TOTAL
POSTED	DATE (YYMMDD)	BY	20. RECEIVER'S VOUCHER NO.

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Previous editions are obsolete

Appendix A3

Shoreline Phase I Construction Traffic Access Route Plan

Appendix A3

South San Francisco Bay Shoreline Study Construction Traffic Access Route Plan

for the

Corps – San Francisco District

Draft Report

June 11, 2015

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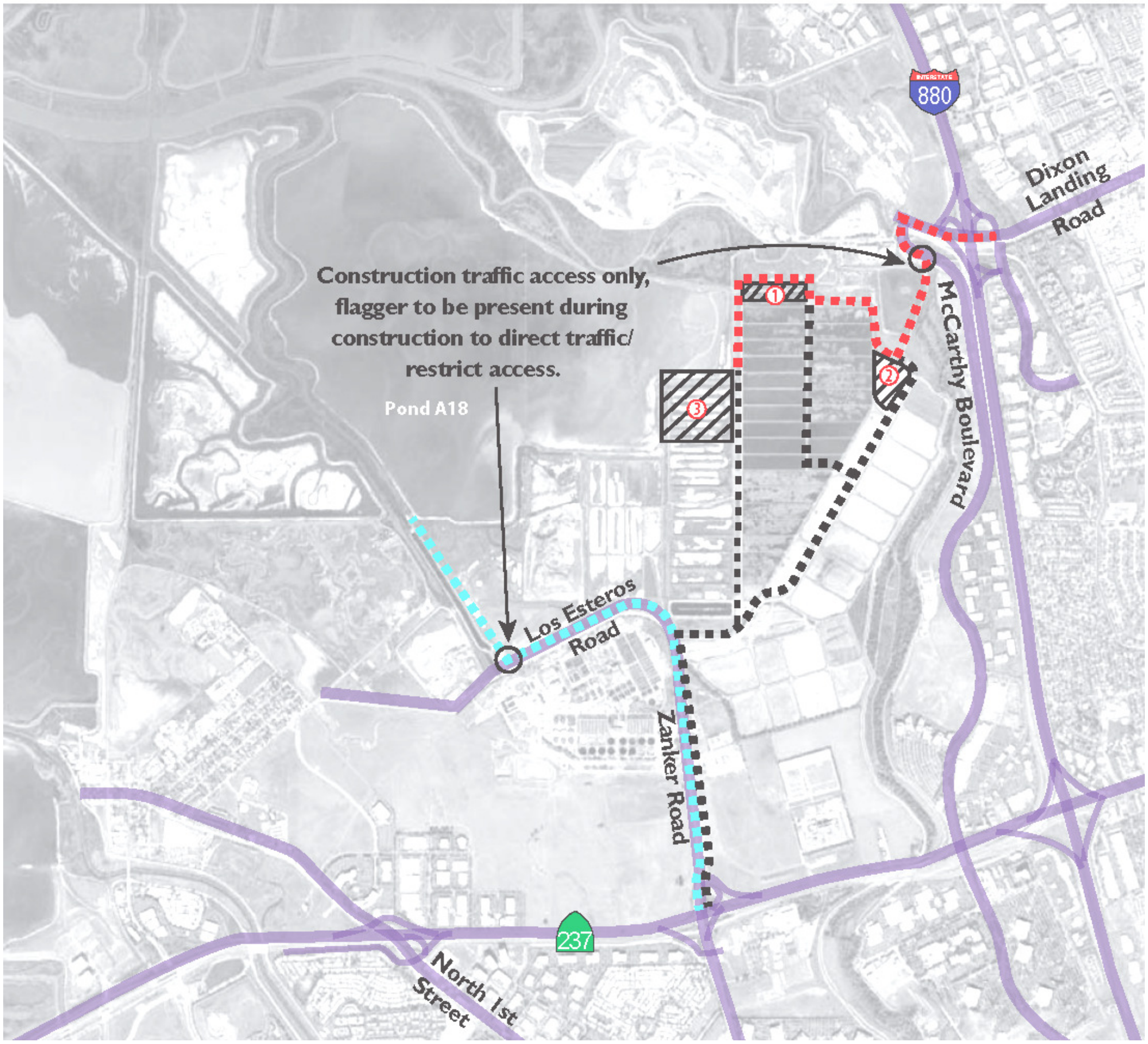

Construction traffic access only, flagger to be present during construction to direct traffic/ restrict access.

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Introduction/Project Description

This report presents the Construction Traffic Access Route Plan for the proposed South San Francisco Bay Shoreline project that consists of levee construction and Pond A12 and Pond A18 restoration in and between Alviso and the surrounding areas within Santa Clara County. The study is located west of Interstate 880 (I-880), south of Dixon Landing Road and north of State Route 237 (SR 237) between the mouth of the Guadalupe River and the mouth of Coyote Creek, and includes the community of Alviso and the San Jose-Santa Clara Water Pollution Control Plant. Regional access to the project site would be provided by I-880 and SR 237 while local access would be provided via Dixon landing Road, McCarthy Boulevard, Zanker Road, North First Street and residential streets within the Alviso Community including Gold Street, Elizabeth Street and Hope Street.

Construction Schedule and Activities

The levee is anticipated to be constructed between 2017 and 2019. Pond A12 is anticipated to be constructed between 2019 and 2020, and Pond A18 is anticipated to be constructed between 2023 and 2025. Construction traffic would be temporary in nature, lasting only for the duration of the construction activity, and would consist of truck trips to deliver fill material and equipment and worker trips to construct the levee and restore the ponds. All the construction activities would occur within the project boundary; no lane or road closures would occur on any roadways as a result of construction or operation of the proposed project. The construction activities are not anticipated to disrupt the pedestrian, transit and bicycle facilities near the study area.

Construction Access Routes

Construction related truck deliveries and worker trips would occur between 9:00 a.m. and 3:00 p.m. and therefore outside the weekday a.m. and p.m. peak commute traffic hours. Truck traffic would generally use designated truck routes where feasible to access the project site. The potential routes that the trucks and workers would take to access the project site area as summarized as follows:

◆ Construction Truck Routes

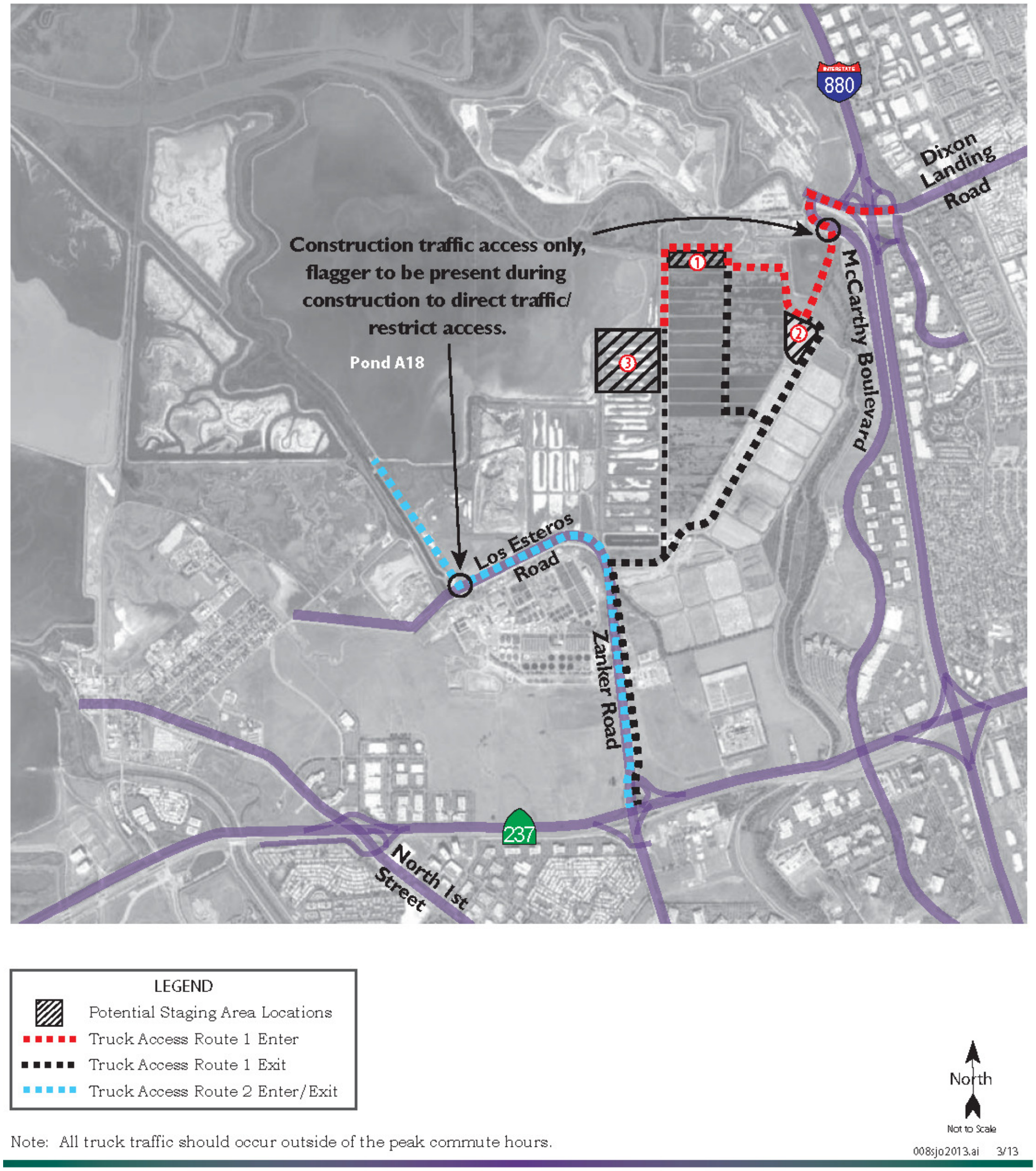
Regional access to the project site would be via I-880 and SR 237, while local access would be via Dixon Landing Road, McCarthy Boulevard, Zanker Road, North First Street, Gold Street, Elizabeth Street, and Hope Street. The proposed three potential truck hauling access routes to enter and exit the project site are summarized as follows:

1. Trucks would enter the staging area on the east side of the Artesian Slough via Dixon Landing Road and a private access road off of McCarthy Boulevard. Trucks would exit the site via Zanker Road.
2. Trucks would access Pond A18 directly via Zanker Road, travel north along Los Esteros Boulevard and use an existing easement located north of the San Jose/Santa Clara Water Pollution Control Plant to drop off the fill material. Trucks would exit the site via Zanker Road.

3. Trucks would access the staging area on the west side of the Artesian Slough via North First Street, Alviso Community (Gold Street, Elizabeth Street and Hope Street) and the Marina Parking Lot.

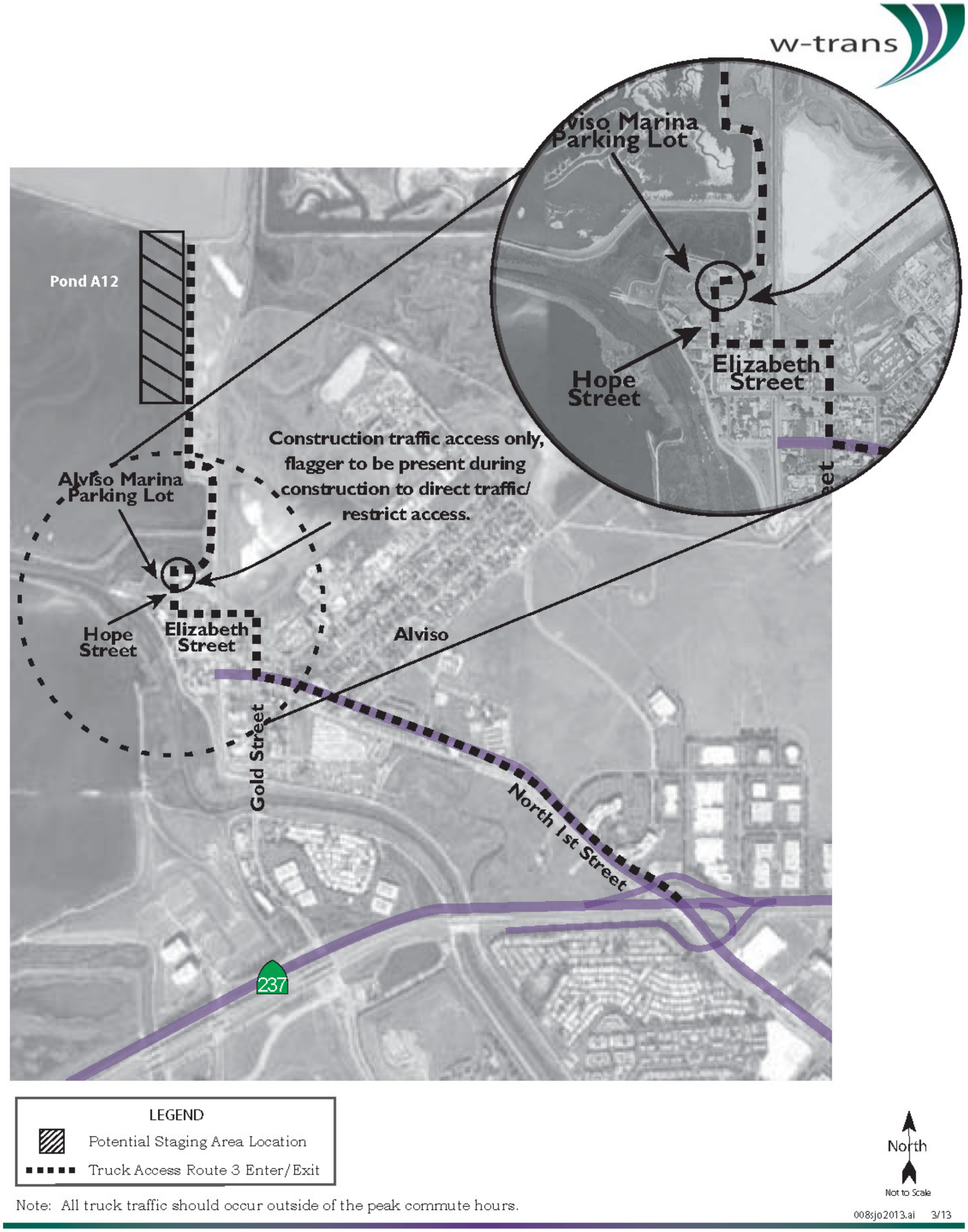
These three construction truck access routes are shown in **Figure 1 and Figure 2.**

Figure 1 Truck Access Routes 1 and 2


880
Dixon Landing Road
Construction traffic access only, flagger to be present during construction to direct traffic/ restrict access.
Pond A18
①
②
③
McCarthy Boulevard
Los Esteros Road
Zanker Road
237
North 1st Street
LEGEND
▨ Potential Staging Area Locations
Truck Access Route 1 Enter
Truck Access Route 1 Exit
Truck Access Route 2 Enter/Exit
North
Not to Scale
008sjo2013.ai 3/13

Note: All truck traffic should occur outside of the peak commute hours.

Figure 2 Truck Access Route 3



Note: All truck traffic should occur outside of the peak commute hours.

◆ Construction Worker Routes

Regional access to the project site would be via I-880 and SR 237, while local access would be via Dixon Landing Road, McCarthy Boulevard, Zanker Road and North First Street, Gold Street, Elizabeth Street, and Hope Street. The proposed access routes for construction workers are summarized as follows:

1. For levee construction and Pond A18 restoration on the east side of the Artesian Slough, construction workers would travel west on Dixon Landing Road, turn left onto McCarthy Boulevard and enter the project site via a private access road off of McCarthy Boulevard. All construction workers would exit the site via Zanker Road.

2. For levee construction and Pond A12 restoration on the west side of the Artesian Slough (within the Alviso Community), construction workers would enter and exit the staging area via North First Street, Gold Street, Elizabeth Street, Hope Street and the Marina Parking lot.

Appendix A4

Transportation Level of Service Calculations

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AM Existing              Tue Jun 5, 2012 11:18:14                  Page 2-1
-------------------------------------------------------------------------------
                    AM Peak Hour - Existing Conditions
               South San Francisco Bay Shoreline Study
                            City of San Jose
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
*******************************************************************************
Intersection #1 Dixon Landing Rd/McCarthy Blvd
*******************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.351
Loss Time (sec):      12               Average Delay (sec/veh):         9.0
Optimal Cycle:        33               Level Of Service:                  A
*******************************************************************************
Street Name:          McCarthy Blvd                  Dixon Landing Rd
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         1  0  0  0  2   0  0  0  0  0   0  0  0  1  0   2  0  1  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        7    0    34     0    0     0     0   55    10   808   69     0
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     7    0    34     0    0     0     0   55    10   808   69     0
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.90 0.90  0.90  0.90 0.90  0.90  0.90 0.90  0.90  0.90 0.90  0.90
PHF Volume:      8    0    38     0    0     0     0   61    11   898   77     0
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:     8    0    38     0    0     0     0   61    11   898   77     0
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:     8    0    38     0    0     0     0   61    11   898   77     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:   0.95 1.00  0.75  1.00 1.00  1.00  1.00 0.98  0.98  0.92 1.00  1.00
Lanes:        1.00 0.00  2.00  0.00 0.00  0.00  0.00 0.85  0.15  2.00 1.00  0.00
Final Sat.:   1805    0  2842     0    0     0     0 1574   286  3502 1900     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.00 0.00  0.01  0.00 0.00  0.00  0.00 0.04  0.04  0.26 0.04  0.00
Crit Moves:              ****                        ****        ****
Green/Cycle:  0.04 0.00  0.04  0.00 0.00  0.00  0.00 0.11  0.11  0.73 0.84  0.00
Volume/Cap:   0.11 0.00  0.35  0.00 0.00  0.00  0.00 0.35  0.35  0.35 0.05  0.00
Delay/Veh:    47.2  0.0  48.9   0.0  0.0   0.0   0.0 42.2  42.2   4.9  1.3   0.0
User DelAdj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   47.2  0.0  48.9   0.0  0.0   0.0   0.0 42.2  42.2   4.9  1.3   0.0
LOS by Move:     D    A     D     A    A     A     A    D     D     A    A     A
HCM2k95thQ:      1    0     2     0    0     0     0    5     5    10    1     0
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************

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PM Existing              Tue Jun 5, 2012 11:18:31                  Page 2-1
-------------------------------------------------------------------------------
                    PM Peak Hour - Existing Conditions
               South San Francisco Bay Shoreline Study
                            City of San Jose
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
*******************************************************************************
Intersection #1 Dixon Landing Rd/McCarthy Blvd
*******************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.605
Loss Time (sec):      12               Average Delay (sec/veh):        13.9
Optimal Cycle:        49               Level Of Service:                  B
*******************************************************************************
Street Name:          McCarthy Blvd                  Dixon Landing Rd
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Y+R:         4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         1  0  0  0  2   0  0  0  0  0   0  0  0  1  0   2  0  1  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        3    0  1200     0    0     0     0   60    10   161    9     0
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:     3    0  1200     0    0     0     0   60    10   161    9     0
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:      3    0  1263     0    0     0     0   63    11   169    9     0
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:     3    0  1263     0    0     0     0   63    11   169    9     0
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:     3    0  1263     0    0     0     0   63    11   169    9     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:   0.95 1.00  0.75  1.00 1.00  1.00  1.00 0.98  0.98  0.92 1.00  1.00
Lanes:        1.00 0.00  2.00  0.00 0.00  0.00  0.00 0.86  0.14  2.00 1.00  0.00
Final Sat.:   1805    0  2842     0    0     0     0 1598   266  3502 1900     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.00 0.00  0.44  0.00 0.00  0.00  0.00 0.04  0.04  0.05 0.00  0.00
Crit Moves:              ****                        ****        ****
Green/Cycle:  0.73 0.00  0.73  0.00 0.00  0.00  0.00 0.07  0.07  0.08 0.15  0.00
Volume/Cap:   0.00 0.00  0.60  0.00 0.00  0.00  0.00 0.60  0.60  0.60 0.03  0.00
Delay/Veh:     3.5  0.0   6.8   0.0  0.0   0.0   0.0 53.9  53.9  48.2 36.8   0.0
User DelAdj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:    3.5  0.0   6.8   0.0  0.0   0.0   0.0 53.9  53.9  48.2 36.8   0.0
LOS by Move:     A    A     A     A    A     A     A    D     D     D    D     A
HCM2k95thQ:      0    0    20     0    0     0     0    7     7     5    0     0
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************

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AM Existing              Tue Jun 5, 2012 11:18:14                 Page 3-1
-----------------------------------------------------------------------------
                      AM Peak Hour - Existing Conditions
                  South San Francisco Bay Shoreline Study
                               City of San Jose
-----------------------------------------------------------------------------
                       Level Of Service Computation Report
              2000 HCM Operations Method (Base Volume Alternative)
*****************************************************************************
Intersection #2 I-880 SB Ramps/Dixon landing Rd
*****************************************************************************
Cycle (sec):        100               Critical Vol./Cap.(X):        0.318
Loss Time (sec):      8               Average Delay (sec/veh):       16.5
Optimal Cycle:       24               Level Of Service:                 B
*****************************************************************************
Street Name:        Dixon Landing Rd                  I-880 SB Ramps
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:           Include          Include          Ignore           Ignore
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        0  0  0  0  0    2  0  0  0  2    0  0  3  0  1    0  0  2  0  2
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0  220    0   276     0   59    30     0  601  1272
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0  220    0   276     0   59    30     0  601  1272
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     0.90 0.90  0.90 0.90 0.90  0.90  0.90 0.90  0.00  0.90 0.90  0.00
PHF Volume:     0    0     0  244    0   307     0   66     0     0  668     0
Reduct Vol:     0    0     0    0    0     0     0    0     0     0    0     0
Reduced Vol:    0    0     0  244    0   307     0   66     0     0  668     0
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
FinalVolume:    0    0     0  244    0   307     0   66     0     0  668     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00 0.92 1.00  0.75  1.00 0.91  1.00  1.00 0.95  0.88
Lanes:       0.00 0.00  0.00 2.00 0.00  2.00  0.00 3.00  1.00  0.00 2.00  2.00
Final Sat.:     0    0     0 3502    0  2842     0 5187  1900     0 3610  3344
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00 0.07 0.00  0.11  0.00 0.01  0.00  0.00 0.18  0.00
Crit Moves:                             ****  ****                   ****
Green/Cycle: 0.00 0.00  0.00 0.34 0.00  0.34  0.00 0.58  0.00  0.00 0.58  0.00
Volume/Cap:  0.00 0.00  0.00 0.21 0.00  0.32  0.00 0.02  0.00  0.00 0.32  0.00
Delay/Veh:    0.0  0.0   0.0 23.6  0.0  24.7   0.0  8.9   0.0   0.0 10.9   0.0
User DelAdj: 1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0 23.6  0.0  24.7   0.0  8.9   0.0   0.0 10.9   0.0
LOS by Move:    A    A     A    C    A     C     A    A     A     A    B     A
HCM2k95thQ:     0    0     0    6    0     8     0    1     0     0   10     0
*****************************************************************************
Note: Queue reported is the number of cars per lane.
*****************************************************************************

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PM Existing              Tue Jun 5, 2012 11:18:31                 Page 3-1
-----------------------------------------------------------------------------
                      PM Peak Hour - Existing Conditions
                  South San Francisco Bay Shoreline Study
                               City of San Jose
-----------------------------------------------------------------------------
                       Level Of Service Computation Report
              2000 HCM Operations Method (Base Volume Alternative)
*****************************************************************************
Intersection #2 I-880 SB Ramps/Dixon landing Rd
*****************************************************************************
Cycle (sec):        100               Critical Vol./Cap.(X):        0.424
Loss Time (sec):      8               Average Delay (sec/veh):       14.5
Optimal Cycle:       28               Level Of Service:                 B
*****************************************************************************
Street Name:        Dixon Landing Rd                  I-880 SB Ramps
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:           Include          Include          Ignore           Ignore
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        0  0  0  0  0    2  0  0  0  2    0  0  3  0  1    0  0  2  0  2
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0  434    0    52     0 1280    40     0  119   670
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0  434    0    52     0 1280    40     0  119   670
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     0.95 0.95  0.95 0.95 0.95  0.95  0.95 0.95  0.00  0.95 0.95  0.00
PHF Volume:     0    0     0  457    0    55     0 1347     0     0  125     0
Reduct Vol:     0    0     0    0    0     0     0    0     0     0    0     0
Reduced Vol:    0    0     0  457    0    55     0 1347     0     0  125     0
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
FinalVolume:    0    0     0  457    0    55     0 1347     0     0  125     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00 0.92 1.00  0.75  1.00 0.91  1.00  1.00 0.95  0.88
Lanes:       0.00 0.00  0.00 2.00 0.00  2.00  0.00 3.00  1.00  0.00 2.00  2.00
Final Sat.:     0    0     0 3502    0  2842     0 5187  1900     0 3610  3344
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00 0.13 0.00  0.02  0.00 0.26  0.00  0.00 0.03  0.00
Crit Moves:                  ****                  ****        ****
Green/Cycle: 0.00 0.00  0.00 0.31 0.00  0.31  0.00 0.61  0.00  0.00 0.61  0.00
Volume/Cap:  0.00 0.00  0.00 0.42 0.00  0.06  0.00 0.42  0.00  0.00 0.06  0.00
Delay/Veh:    0.0  0.0   0.0 27.8  0.0  24.5   0.0 10.2   0.0   0.0  7.8   0.0
User DelAdj: 1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0 27.8  0.0  24.5   0.0 10.2   0.0   0.0  7.8   0.0
LOS by Move:    A    A     A    C    A     C     A    B     A     A    A     A
HCM2k95thQ:     0    0     0   11    0     1     0   14     0     0    2     0
*****************************************************************************
Note: Queue reported is the number of cars per lane.
*****************************************************************************

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AM Existing              Thu Jun 7, 2012 10:49:11                   Page 4-1
-------------------------------------------------------------------------------
                    AM Peak Hour - Existing Conditions
               South San Francisco Bay Shoreline Study
                            City of San Jose
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
            2000 HCM Operations Method (Base Volume Alternative)
*******************************************************************************
Intersection #3 I-880 NB Ramp-California Cir/Dixon landing Rd
*******************************************************************************
Cycle (sec):       100                 Critical Vol./Cap.(X):        0.689
Loss Time (sec):    16                 Average Delay (sec/veh):       17.9
Optimal Cycle:      67                 Level Of Service:                 B
*******************************************************************************
Street Name:           Dixon Landing Rd            I-880 NB Ramp-California Cir
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected        Protected
Rights:            Ovl            Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:         1  1  0  0  2    1  0  0  1  1    0  0  3  0  1    1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      145   16   479    18    0    46     0  174   105    61 1682   318
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   145   16   479    18    0    46     0  174   105    61 1682   318
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.94 0.94  0.94  0.94 0.94  0.94  0.94 0.94  0.94  0.94 0.94  0.94
PHF Volume:    154   17   510    19    0    49     0  185   112    65 1789   338
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   154   17   510    19    0    49     0  185   112    65 1789   338
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   154   17   510    19    0    49     0  185   112    65 1789   338
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:   0.96 0.96  0.75  0.95 1.00  0.85  1.00 0.91  0.85  0.95 0.89  0.89
Lanes:        1.80 0.20  2.00  1.00 0.00  2.00  0.00 3.00  1.00  1.00 2.52  0.48
Final Sat.:   3275  361  2842  1805    0  3230     0 5187  1615  1805 4258   805
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.05 0.05  0.18  0.01 0.00  0.02  0.00 0.04  0.07  0.04 0.42  0.42
Crit Moves:               ****              ****  ****                 ****
Green/Cycle:  0.21 0.21  0.42  0.02 0.00  0.02  0.00 0.40  0.40  0.21 0.61  0.61
Volume/Cap:   0.23 0.23  0.43  0.48 0.00  0.69  0.00 0.09  0.17  0.17 0.69  0.69
Delay/Veh:    33.1 33.1  21.0  57.3  0.0  73.5   0.0 18.6  19.4  32.7 13.8  13.8
User DelAdj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   33.1 33.1  21.0  57.3  0.0  73.5   0.0 18.6  19.4  32.7 13.8  13.8
LOS by Move:     C    C     C     E    A     E     A    B     B     C    B     B
HCM2k95thQ:      5    5    12     3    0     4     0    3     4     3   29    29
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************


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PM Existing              Thu Jun 7, 2012 10:49:12                   Page 4-1
-------------------------------------------------------------------------------
                    PM Peak Hour - Existing Conditions
               South San Francisco Bay Shoreline Study
                            City of San Jose
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
            2000 HCM Operations Method (Base Volume Alternative)
*******************************************************************************
Intersection #3 I-880 NB Ramp-California Cir/Dixon landing Rd
*******************************************************************************
Cycle (sec):       100                 Critical Vol./Cap.(X):        0.748
Loss Time (sec):    16                 Average Delay (sec/veh):       22.9
Optimal Cycle:      76                 Level Of Service:                 C
*******************************************************************************
Street Name:           Dixon Landing Rd            I-880 NB Ramp-California Cir
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected        Protected
Rights:            Ovl            Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:         1  1  0  0  2    1  0  0  1  1    0  0  3  0  1    1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      120  108   721    20    0     7     0 1174   567    31  670   217
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   120  108   721    20    0     7     0 1174   567    31  670   217
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
PHF Volume:    122  110   736    20    0     7     0 1198   579    32  684   221
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   122  110   736    20    0     7     0 1198   579    32  684   221
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   122  110   736    20    0     7     0 1198   579    32  684   221
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:   0.97 0.97  0.75  0.95 1.00  0.85  1.00 0.91  0.85  0.95 0.88  0.88
Lanes:        1.05 0.95  2.00  1.00 0.00  2.00  0.00 3.00  1.00  1.00 2.27  0.73
Final Sat.:   1948 1753  2842  1805    0  3230     0 5187  1615  1805 3773  1222
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.06 0.06  0.26  0.01 0.00  0.00  0.00 0.23  0.36  0.02 0.18  0.18
Crit Moves:               ****  ****                       ****  ****
Green/Cycle:  0.32 0.32  0.35  0.02 0.00  0.02  0.00 0.48  0.48  0.02 0.50  0.50
Volume/Cap:   0.19 0.19  0.75  0.75 0.00  0.15  0.00 0.48  0.75  0.75 0.36  0.36
Delay/Veh:    24.6 24.6  32.1 121.6  0.0  50.0   0.0 17.8  25.2 101.0 15.2  15.2
User DelAdj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   24.6 24.6  32.1 121.6  0.0  50.0   0.0 17.8  25.2 101.0 15.2  15.2
LOS by Move:     C    C     C     F    A     D     A    B     C     F    B     B
HCM2k95thQ:      5    5    23     4    0     1     0   17    26     5   12    12
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************


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--------------------------------------------------------------------------------
                     AM Peak Hour - Existing Conditions
                South San Francisco Bay Shoreline Study
                            City of San Jose
--------------------------------------------------------------------------------

                   Level Of Service Computation Report
            2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #4 237/ZANKER (N)
********************************************************************************
Cycle (sec):         88              Critical Vol./Cap.(X):        0.165
Loss Time (sec):      9              Average Delay (sec/veh):       13.0
Optimal Cycle:       36              Level Of Service:                 B
********************************************************************************
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected       Split Phase      Split Phase
Rights:          Ignore           Include          Include           Ovl
Min. Green:    0   10    10     7   10     0     0    0     0    10    0    10
Y+R:         4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:       0  0  2  0  1    1  0  1  0  0    0  0  0  0  0    2  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0   83   651    22   57     0     0    0     0   334    0    63
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0   83   651    22   57     0     0    0     0   334    0    63
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.00  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:    0   87     0    23   60     0     0    0     0   352    0    66
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   0   87     0    23   60     0     0    0     0   352    0    66
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0   87     0    23   60     0     0    0     0   352    0    66
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.92 1.00  0.92  0.92 1.00  0.92  0.92 1.00  0.92  0.83 1.00  0.92
Lanes:       0.00 2.00  1.00  1.00 1.00  0.00  0.00 0.00  0.00  2.00 0.00  1.00
Final Sat.:     0 3800  1750  1750 1900     0     0    0     0  3150    0  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.02  0.00  0.01 0.03  0.00  0.00 0.00  0.00  0.11 0.00  0.04
Crit Moves:       ****        ****                              ****
Green Time:   0.0 12.3   0.0   7.1 19.4   0.0   0.0  0.0   0.0  59.6  0.0  66.7
Volume/Cap:  0.00 0.16  0.00  0.16 0.14  0.00  0.00 0.00  0.00  0.16 0.00  0.05
Delay/Veh:    0.0 34.0   0.0  40.2 28.4   0.0   0.0  0.0   0.0   5.3  0.0   2.7
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0 34.0   0.0  40.2 28.4   0.0   0.0  0.0   0.0   5.3  0.0   2.7
LOS by Move:    A   C-     A     D    C     A     A    A     A     A    A     A
HCM2kAvgQ:      0    1     0     1    1     0     0    0     0     2    0     0
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************


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                     PM Peak Hour - Existing Conditions
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                   Level Of Service Computation Report
            2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #4 237/ZANKER (N)
********************************************************************************
Cycle (sec):         71              Critical Vol./Cap.(X):        0.242
Loss Time (sec):      9              Average Delay (sec/veh):       16.2
Optimal Cycle:       36              Level Of Service:                 B
********************************************************************************
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected       Split Phase      Split Phase
Rights:          Ignore           Include          Include          Include
Min. Green:    0   10    10     7   10     0     0    0     0    10    0    10
Y+R:         4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:       0  0  2  0  1    1  0  1  0  0    0  0  0  0  0    2  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 13 Sep 2012 << 5:00PM-6PM
Base Vol:      0   65   534    22  317     0     0    0     0   513    0    81
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0   65   534    22  317     0     0    0     0   513    0    81
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.91 0.91  0.00  0.91 0.91  0.91  0.91 0.91  0.91  0.91 0.91  0.91
PHF Volume:    0   71     0    24  348     0     0    0     0   564    0    89
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   0   71     0    24  348     0     0    0     0   564    0    89
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0   71     0    24  348     0     0    0     0   564    0    89
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.92 1.00  0.92  0.92 1.00  0.92  0.92 1.00  0.92  0.83 1.00  0.92
Lanes:       0.00 2.00  1.00  1.00 1.00  0.00  0.00 0.00  0.00  2.00 0.00  1.00
Final Sat.:     0 3800  1750  1750 1900     0     0    0     0  3150    0  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.02  0.00  0.01 0.18  0.00  0.00 0.00  0.00  0.18 0.00  0.05
Crit Moves:       ****        ****                              ****
Green Time:   0.0 10.0   0.0   7.0 17.0   0.0   0.0  0.0   0.0  45.0  0.0  45.0
Volume/Cap:  0.00 0.13  0.00  0.14 0.77  0.00  0.00 0.00  0.00  0.28 0.00  0.08
Delay/Veh:    0.0 26.8   0.0  29.6 32.8   0.0   0.0  0.0   0.0   5.9  0.0   5.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0 26.8   0.0  29.6 32.8   0.0   0.0  0.0   0.0   5.9  0.0   5.0
LOS by Move:    A    C     A     C   C-     A     A    A     A     A    A     A
HCM2kAvgQ:      0    1     0     1    9     0     0    0     0     3    0     1
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************


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                    AM Peak Hour - Existing Conditions
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--------------------------------------------------------------------------------
                    Level Of Service Computation Report
          2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #5 237/ZANKER (S)
********************************************************************************
Cycle (sec):          94              Critical Vol./Cap.(X):        0.405
Loss Time (sec):       9              Average Delay (sec/veh):       21.1
Optimal Cycle:        36              Level Of Service:                C+
********************************************************************************
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected       Split Phase      Split Phase
Rights:          Ignore          Include            Ovl            Include
Min. Green:    0   10   10     7   10    0    10   10   10     0    0    0
Y+R:         4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
Lanes:       0  0  3  0  1   1  0  2  0  0   0  1  0  0  2   0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0  705   193    48  343     0    29    1   621     0    0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0  705   193    48  343     0    29    1   621     0    0     0
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.00  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:    0  742     0    51  361     0    31    1   654     0    0     0
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   0  742     0    51  361     0    31    1   654     0    0     0
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0  742     0    51  361     0    31    1   654     0    0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.92 1.00  0.92  0.92 1.00  0.92  0.92 1.00  0.83  0.92 1.00  0.92
Lanes:       0.00 3.00  1.00  1.00 2.00  0.00  0.97 0.03  2.00  0.00 0.00  0.00
Final Sat.:    0 5700  1750  1750 3800     0  1696   58  3150     0    0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.13  0.00  0.03 0.10  0.00  0.02 0.02  0.21  0.00 0.00  0.00
Crit Moves:       ****        ****                        ****
Green Time:   0.0 30.1   0.0   7.0 37.1   0.0  47.9 47.9  47.9   0.0  0.0   0.0
Volume/Cap:  0.00 0.41  0.00  0.39 0.24  0.00  0.04 0.04  0.41  0.00 0.00  0.00
Delay/Veh:    0.0 25.7   0.0  49.9 19.4   0.0  11.6 11.6  15.0   0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0 25.7   0.0  49.9 19.4   0.0  11.6 11.6  15.0   0.0  0.0   0.0
LOS by Move:   A    C     A     D   B-     A    B+   B+     B     A    A     A
HCM2kAvgQ:     0    5     0     2    3     0     0    0     7     0    0     0
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************


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               South San Francisco Bay Shoreline Study
                            City of San Jose
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
          2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #5 237/ZANKER (S)
********************************************************************************
Cycle (sec):          76              Critical Vol./Cap.(X):        0.330
Loss Time (sec):       9              Average Delay (sec/veh):       13.6
Optimal Cycle:        36              Level Of Service:                 B
********************************************************************************
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected       Split Phase      Split Phase
Rights:          Ignore          Include          Include          Include
Min. Green:    0   10   10     7   10    0    10   10   10     0    0    0
Y+R:         4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
Lanes:       0  0  3  0  1   1  0  2  0  0   0  1  0  0  2   0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 13 Sep 2012 << 5:00-6:00PM
Base Vol:      0  617   690   284  560     0     2    3    69     0    0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0  617   690   284  560     0     2    3    69     0    0     0
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.94 0.94  0.00  0.94 0.94  0.94  0.94 0.94  0.94  0.94 0.94  0.94
PHF Volume:    0  656     0   302  596     0     2    3    73     0    0     0
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   0  656     0   302  596     0     2    3    73     0    0     0
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0  656     0   302  596     0     2    3    73     0    0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.92 1.00  0.92  0.92 1.00  0.92  0.95 0.95  0.83  0.92 1.00  0.92
Lanes:       0.00 3.00  1.00  1.00 2.00  0.00  0.40 0.60  2.00  0.00 0.00  0.00
Final Sat.:    0 5700  1750  1750 3800     0   720 1080  3150     0    0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.12  0.00  0.17 0.16  0.00  0.00 0.00  0.02  0.00 0.00  0.00
Crit Moves:       ****        ****             ****
Green Time:   0.0 22.8   0.0  34.2 57.0   0.0  10.0 10.0  10.0   0.0  0.0   0.0
Volume/Cap:  0.00 0.38  0.00  0.38 0.21  0.00  0.02 0.02  0.18  0.00 0.00  0.00
Delay/Veh:    0.0 21.2   0.0  14.2  2.9   0.0  28.8 28.8  29.5   0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0 21.2   0.0  14.2  2.9   0.0  28.8 28.8  29.5   0.0  0.0   0.0
LOS by Move:   A   C+     A     B    A     A     C    C     C     A    A     A
HCM2kAvgQ:     0    4     0     5    2     0     0    0     1     0    0     0
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************


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                 AM Peak Hour - Existing Conditions
             South San Francisco Bay Shoreline Study
                          City of San Jose
---------------------------------------------------------------------------
                  Level Of Service Computation Report
          2000 HCM Operations Method (Base Volume Alternative)
***************************************************************************
Intersection #6 237/FIRST (N)
***************************************************************************
Cycle (sec):         93               Critical Vol./Cap.(X):        0.278
Loss Time (sec):      9               Average Delay (sec/veh):       19.4
Optimal Cycle:       36               Level Of Service:                B-
***************************************************************************
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:           Include          Include          Include           Ovl
Min. Green:     7   10     0     0   10    10     0    0     0    10   10    10
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:         2  0  2  0  0   0  0  1  1  0   0  0  0  0  0   1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     358  517     0     0  274    90     0    0     0    95    1   126
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  358  517     0     0  274    90     0    0     0    95    1   126
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.95
PHF Volume:   377  544     0     0  288    95     0    0     0   100    1   133
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  377  544     0     0  288    95     0    0     0   100    1   133
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  377  544     0     0  288    95     0    0     0   100    1   133
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.83 1.00  0.92  0.92 1.00  0.92  0.92 1.00  0.92  0.92 1.00  0.92
Lanes:       2.00 2.00  0.00  0.00 1.47  0.53  0.00 0.00  0.00  1.98 0.02  1.00
Final Sat.:  3150 3800     0     0 2801   920     0    0     0  3466   36  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.12 0.14  0.00  0.00 0.10  0.10  0.00 0.00  0.00  0.03 0.03  0.08
Crit Moves:  ****                  ****                              ****
Green Time:  31.5 58.7   0.0   0.0 27.1  27.1   0.0  0.0   0.0  25.3 25.3  25.3
Volume/Cap:  0.35 0.23  0.00  0.00 0.35  0.35  0.00 0.00  0.00  0.11 0.11  0.28
Delay/Veh:   24.0  7.6   0.0   0.0 26.9  26.9   0.0  0.0   0.0  25.6 25.6  28.1
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  24.0  7.6   0.0   0.0 26.9  26.9   0.0  0.0   0.0  25.6 25.6  28.1
LOS by Move:    C    A     A     A    C     C     A    A     A     C    C     C
HCM2kAvgQ:      5    3     0     0    5     5     0    0     0     1    1     3
***************************************************************************
Note: Queue reported is the number of cars per lane.
***************************************************************************


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---------------------------------------------------------------------------
                 PM Peak Hour - Existing Conditions
             South San Francisco Bay Shoreline Study
                          City of San Jose
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                  Level Of Service Computation Report
          2000 HCM Operations Method (Base Volume Alternative)
***************************************************************************
Intersection #6 237/FIRST (N)
***************************************************************************
Cycle (sec):         75               Critical Vol./Cap.(X):        0.582
Loss Time (sec):      9               Average Delay (sec/veh):       19.6
Optimal Cycle:       38               Level Of Service:                B-
***************************************************************************
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     7   10     0     0   10    10     0    0     0    10   10    10
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:         2  0  2  0  0   0  0  1  1  0   0  0  0  0  0   1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 13 Sep 2012 << 5:00PM-6PM
Base Vol:     816  170     0     0  506   179     0    0     0   167    2    67
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  816  170     0     0  506   179     0    0     0   167    2    67
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.96 0.96  0.96  0.96 0.96  0.96  0.96 0.96  0.96  0.96 0.96  0.96
PHF Volume:   850  177     0     0  527   186     0    0     0   174    2    70
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  850  177     0     0  527   186     0    0     0   174    2    70
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  850  177     0     0  527   186     0    0     0   174    2    70
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.83 1.00  0.92  0.92 0.98  0.95  0.92 1.00  0.92  0.93 0.95  0.92
Lanes:       2.00 2.00  0.00  0.00 1.46  0.54  0.00 0.00  0.00  1.98 0.02  1.00
Final Sat.:  3150 3800     0     0 2732   967     0    0     0  3508   42  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.27 0.05  0.00  0.00 0.19  0.19  0.00 0.00  0.00  0.05 0.05  0.04
Crit Moves:  ****                  ****                        ****
Green Time:  32.7 56.0   0.0   0.0 23.3  23.3   0.0  0.0   0.0  10.0 10.0  10.0
Volume/Cap:  0.62 0.06  0.00  0.00 0.62  0.62  0.00 0.00  0.00  0.37 0.37  0.30
Delay/Veh:   17.2  2.5   0.0   0.0 23.1  23.1   0.0  0.0   0.0  30.1 30.1  30.1
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  17.2  2.5   0.0   0.0 23.1  23.1   0.0  0.0   0.0  30.1 30.1  30.1
LOS by Move:    B    A     A     A    C     C     A    A     A     C    C     C
HCM2kAvgQ:      9    1     0     0    8     8     0    0     0     2    2     2
***************************************************************************
Note: Queue reported is the number of cars per lane.
***************************************************************************


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                   AM Peak Hour - Existing Conditions
              South San Francisco Bay Shoreline Study
                           City of San Jose
--------------------------------------------------------------------------------
                   Level Of Service Computation Report
          2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #7 237/FIRST (S)
********************************************************************************
Cycle (sec):         158              Critical Vol./Cap.(X):          0.526
Loss Time (sec):      12              Average Delay (sec/veh):         44.7
Optimal Cycle:        49              Level Of Service:                   D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:           Ignore           Include          Include          Ignore
Min. Green:     7   10    10     7   10    10    10   10    10    10   10    10
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        1  0  2  0  1    1  0  2  1  0    1  0  0  1  0    1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       4  667   232   115  251     6    26   10    17   718    2   194
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    4  667   232   115  251     6    26   10    17   718    2   194
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
PHF Adj:     0.95 0.95  0.00  0.95 0.95  0.95  0.95 0.95  0.95  0.95 0.95  0.00
PHF Volume:     4  702     0   121  264     6    27   11    18   756    2     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    4  702     0   121  264     6    27   11    18   756    2     0
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
FinalVolume:    4  702     0   121  264     6    27   11    18   756    2     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.92 1.00  0.92  0.92 1.00  0.92  0.92 1.00  0.92  0.92 1.00  0.92
Lanes:       1.00 2.00  1.00  1.00 2.92  0.08  1.00 0.35  0.65  1.99 0.01  1.00
Final Sat.:  1750 3800  1750  1750 5556   133  1750  668  1135  3491   10  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.18  0.00  0.07 0.05  0.05  0.02 0.02  0.02  0.22 0.22  0.00
Crit Moves:       ****        ****                   ****              ****
Green Time:  30.2 53.4   0.0  20.0 43.2  43.2  10.0 10.0  10.0  62.6 62.6   0.0
Volume/Cap:  0.01 0.55  0.00  0.55 0.17  0.17  0.25 0.25  0.25  0.55 0.55  0.00
Delay/Veh:   51.9 44.1   0.0  74.1 44.0  44.0  75.7 75.6  75.6  38.3 38.3   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  51.9 44.1   0.0  74.1 44.0  44.0  75.7 75.6  75.6  38.3 38.3   0.0
LOS by Move:   D-    D     A     E    D     D    E-   E-    E-    D+   D+     A
HCM2kAvgQ:      0   13     0     6    3     3     2    2     2    15   15     0
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************


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PM Existing             Tue Feb 26, 2013 13:03:58              Page 5-1
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                   PM Peak Hour - Existing Conditions
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          2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #7 237/FIRST (S)
********************************************************************************
Cycle (sec):          77              Critical Vol./Cap.(X):          0.499
Loss Time (sec):      12              Average Delay (sec/veh):         21.3
Optimal Cycle:        49              Level Of Service:                  C+
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:           Ignore           Include          Include          Include
Min. Green:     7   10    10     7   10    10    10   10    10    10   10    10
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        1  0  2  0  1    2  0  2  1  0    1  0  0  1  0    1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 13 Sep 2012 << 5:00-6PM
Base Vol:      37  938   360   194  463    10     2    4     9   280    4    28
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   37  938   360   194  463    10     2    4     9   280    4    28
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.94 0.94  0.00  0.94 0.94  0.94  0.94 0.94  0.94  0.94 0.94  0.94
PHF Volume:    39  998     0   206  493    11     2    4    10   298    4    30
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   39  998     0   206  493    11     2    4    10   298    4    30
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   39  998     0   206  493    11     2    4    10   298    4    30
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.92 1.00  0.92  0.83 0.98  0.95  0.92 0.95  0.95  0.93 0.95  0.92
Lanes:       1.00 2.00  1.00  2.00 2.93  0.07  1.00 0.31  0.69  1.97 0.03  1.00
Final Sat.:  1750 3800  1750  3150 5481   118  1750  554  1246  3500   50  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.26  0.00  0.07 0.09  0.09  0.00 0.01  0.01  0.09 0.09  0.02
Crit Moves:       ****        ****                   ****        ****
Green Time:  18.0 35.0   0.0   8.7 25.7  25.7  10.0 10.0  10.0  11.3 11.3  11.3
Volume/Cap:  0.10 0.58  0.00  0.58 0.27  0.27  0.01 0.06  0.06  0.58 0.58  0.12
Delay/Veh:   23.2 16.1   0.0  34.8 18.9  18.9  29.2 29.5  29.5  32.2 32.2  28.7
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  23.2 16.1   0.0  34.8 18.9  18.9  29.2 29.5  29.5  32.2 32.2  28.7
LOS by Move:    C    B     A    C-   B-    B-     C    C     C    C-   C-     C
HCM2kAvgQ:      1    9     0     3    3     3     0    0     0     4    4     1
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************


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                     Level Of Service Computation Report
            2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #1 Dixon Landing Rd/McCarthy Blvd
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.403
Loss Time (sec):      12               Average Delay (sec/veh):        13.5
Optimal Cycle:        35               Level Of Service:                  B
********************************************************************************
Street Name:            McCarthy Blvd                Dixon Landing Rd
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected         Protected         Protected         Protected
Rights:          Include           Include           Include           Include
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
Y+R:         4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        1  0  0  0  2    0  0  0  0  0    0  0  0  1  0    2  0  1  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      11    0   135     0    0     0     0   59    14   938   96     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   11    0   135     0    0     0     0   59    14   938   96     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    11    0   135     0    0     0     0   59    14   938   96     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   11    0   135     0    0     0     0   59    14   938   96     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   11    0   135     0    0     0     0   59    14   938   96     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.95 1.00  0.75  1.00 1.00  1.00  1.00 0.97  0.97  0.92 1.00  1.00
Lanes:       1.00 0.00  2.00  0.00 0.00  0.00  0.00 0.81  0.19  2.00 1.00  0.00
Final Sat.:  1805    0  2842     0    0     0     0 1496   355  3502 1900     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.00  0.05  0.00 0.00  0.00  0.00 0.04  0.04  0.27 0.05  0.00
Crit Moves:             ****                        ****        ****
Green/Cycle: 0.12 0.00  0.12  0.00 0.00  0.00  0.00 0.10  0.10  0.66 0.76  0.00
Volume/Cap:  0.05 0.00  0.40  0.00 0.00  0.00  0.00 0.40  0.40  0.40 0.07  0.00
Delay/Veh:   39.3  0.0  41.7   0.0  0.0   0.0   0.0 43.8  43.8   7.8  3.0   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  39.3  0.0  41.7   0.0  0.0   0.0   0.0 43.8  43.8   7.8  3.0   0.0
LOS by Move:    D    A     D     A    A     A     A    D     D     A    A     A
HCM2k95thQ:     1    0     5     0    0     0     0    5     5    13    2     0
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************


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                     Level Of Service Computation Report
            2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #2 I-880 SB Ramps/Dixon Landing Rd
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.371
Loss Time (sec):       8               Average Delay (sec/veh):        14.5
Optimal Cycle:        26               Level Of Service:                  B
********************************************************************************
Street Name:          Dixon Landing Rd                  I-880 SB Ramps
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected         Protected         Protected         Protected
Rights:          Include           Include           Ignore            Ignore
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
Y+R:         4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        0  0  0  0  0    2  0  0  0  2    0  0  3  0  1    0  0  2  0  2
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0   205    0   279     0  189    32     0  878  1540
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0   205    0   279     0  189    32     0  878  1540
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:     0    0     0   205    0   279     0  189     0     0  878     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0    0     0   205    0   279     0  189     0     0  878     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
FinalVolume:    0    0     0   205    0   279     0  189     0     0  878     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  0.92 1.00  0.75  1.00 0.91  1.00  1.00 0.95  0.88
Lanes:       0.00 0.00  0.00  2.00 0.00  2.00  0.00 3.00  1.00  0.00 2.00  2.00
Final Sat.:     0    0     0  3502    0  2842     0 5187  1900     0 3610  3344
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.06 0.00  0.10  0.00 0.04  0.00  0.00 0.24  0.00
Crit Moves:                              ****  ****                  ****
Green/Cycle: 0.00 0.00  0.00  0.26 0.00  0.26  0.00 0.66  0.00  0.00 0.66  0.00
Volume/Cap:  0.00 0.00  0.00  0.22 0.00  0.37  0.00 0.06  0.00  0.00 0.37  0.00
Delay/Veh:    0.0  0.0   0.0  28.8  0.0  30.3   0.0  6.2   0.0   0.0  7.9   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0  28.8  0.0  30.3   0.0  6.2   0.0   0.0  7.9   0.0
LOS by Move:    A    A     A     C    A     C     A    A     A     A    A     A
HCM2k95thQ:     0    0     0     5    0     8     0    2     0     0   12     0
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************


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                       Level Of Service Computation Report
                2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #3 I-880 NB Ramp-California Cir/Dixon Landing Rd
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.821
Loss Time (sec):      16              Average Delay (sec/veh):        21.5
Optimal Cycle:        92              Level Of Service:                  C
********************************************************************************
Street Name:          Dixon Landing Rd           I-880 NB Ramp-California Cir
Approach:       North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase        Protected         Protected
Rights:            Ovl            Include           Include           Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Y+R:          4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0
Lanes:        1  1  0  0  2   1  0  0  1  1   0  0  3  0  1   1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     232   35  618   17    0   55    0  376  138   61 2019  449
Growth Adj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:  232   35  618   17    0   55    0  376  138   61 2019  449
User Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:   232   35  618   17    0   55    0  376  138   61 2019  449
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol:  232   35  618   17    0   55    0  376  138   61 2019  449
PCE Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:  232   35  618   17    0   55    0  376  138   61 2019  449
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:  0.96 0.96 0.75 0.95 1.00 0.85 1.00 0.91 0.85 0.95 0.89 0.89
Lanes:       1.74 0.26 2.00 1.00 0.00 2.00 0.00 3.00 1.00 1.00 2.45 0.55
Final Sat.:  3163  477 2842 1805    0 3230    0 5187 1615 1805 4129  918
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.07 0.07 0.22 0.01 0.00 0.02 0.00 0.07 0.09 0.03 0.49 0.49
Crit Moves:             ****           **** ****                     ****
Green/Cycle: 0.22 0.22 0.39 0.02 0.00 0.02 0.00 0.43 0.43 0.17 0.60 0.60
Volume/Cap:  0.33 0.33 0.55 0.45 0.00 0.82 0.00 0.17 0.20 0.20 0.82 0.82
Delay/Veh:   32.8 32.8 24.2 56.9  0.0 101.8  0.0 17.7 18.1 36.1 17.9 17.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:  32.8 32.8 24.2 56.9  0.0 101.8  0.0 17.7 18.1 36.1 17.9 17.9
LOS by Move:    C    C    C    E    A    F    A    B    B    D    B    B
HCM2k95thQ:     7    7   16    2    0    5    0    5    5    3   40   40
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************


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PM 2019 No Project         Fri Mar 1, 2013 11:07:07                  Page 2-1
--------------------------------------------------------------------------------
                         PM Peak Hour - 2019 No Project
                      South San Francisco Bay Shoreline Study
                                City of San Jose
--------------------------------------------------------------------------------
                       Level Of Service Computation Report
                2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #4 237/ZANKER (N)
********************************************************************************
Cycle (sec):          71              Critical Vol./Cap.(X):         0.247
Loss Time (sec):       9              Average Delay (sec/veh):        13.3
Optimal Cycle:        36              Level Of Service:                  B
********************************************************************************
Approach:       North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase       Split Phase
Rights:           Ignore          Include          Include           Include
Min. Green:    0   10   10    7   10    0    0    0    0   10    0   10
Y+R:          4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0  4.0
Lanes:        0  0  2  0  1   1  0  1  0  0   0  0  0  0  0   2  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  151  704   35  188    0    0    0    0  491    0   98
Growth Adj:  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:    0  151  704   35  188    0    0    0    0  491    0   98
User Adj:    1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:     1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:     0  151    0   35  188    0    0    0    0  491    0   98
Reduct Vol:     0    0    0    0    0    0    0    0    0    0    0    0
Reduced Vol:    0  151    0   35  188    0    0    0    0  491    0   98
PCE Adj:     1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:     1.00 1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:    0  151    0   35  188    0    0    0    0  491    0   98
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:  0.92 1.00 0.92 0.92 1.00 0.92 0.92 1.00 0.92 0.83 1.00 0.92
Lanes:       0.00 2.00 1.00 1.00 1.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00
Final Sat.:     0 3800 1750 1750 1900    0    0    0    0 3150    0 1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.04 0.00 0.02 0.10 0.00 0.00 0.00 0.00 0.16 0.00 0.06
Crit Moves:       ****      ****                          ****
Green Time:   0.0 11.2  0.0  7.0 18.2  0.0  0.0  0.0  0.0 43.8  0.0 43.8
Volume/Cap:  0.00 0.25 0.00 0.20 0.39 0.00 0.00 0.00 0.00 0.25 0.00 0.09
Delay/Veh:    0.0 26.5  0.0 30.0 22.3  0.0  0.0  0.0  0.0  6.2  0.0  5.5
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:   0.0 26.5  0.0 30.0 22.3  0.0  0.0  0.0  0.0  6.2  0.0  5.5
LOS by Move:    A    C    A    C   C+    A    A    A    A    A    A    A
HCM2kAvgQ:      0    1    0    1    4    0    0    0    0    3    0    1
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************


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PM 2019 No Project         Fri Mar 1, 2013 11:07:07                 Page 3-1
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                       PM Peak Hour - 2019 No Project
                   South San Francisco Bay Shoreline Study
                              City of San Jose
------------------------------------------------------------------------------
                     Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
******************************************************************************
Intersection #5 237/ZANKER (S)
******************************************************************************
Cycle (sec):          76             Critical Vol./Cap.(X):         0.477
Loss Time (sec):       9             Average Delay (sec/veh):        18.8
Optimal Cycle:        36             Level Of Service:                 B-
******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:           Ignore           Include          Include          Include
Min. Green:    0   10    10    7   10     0   10   10    10    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:       0  0  3  0  1   1  0  2  0  0   0  1  0  0  2   0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0  742   746  177  529     0   59    2   597    0    0     0
Growth Adj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:   0  742   746  177  529     0   59    2   597    0    0     0
User Adj:   1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:    1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:    0  742     0  177  529     0   59    2   597    0    0     0
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   0  742     0  177  529     0   59    2   597    0    0     0
PCE Adj:    1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:    1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   0  742     0  177  529     0   59    2   597    0    0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment: 0.92 1.00  0.92 0.92 1.00  0.92 0.92 1.00  0.83 0.92 1.00  0.92
Lanes:      0.00 3.00  1.00 1.00 2.00  0.00 0.97 0.03  2.00 0.00 0.00  0.00
Final Sat.:    0 5700  1750 1750 3800     0 1697   58  3150    0    0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.00 0.13  0.00 0.10 0.14  0.00 0.03 0.03  0.19 0.00 0.00  0.00
Crit Moves:      ****       ****                       ****
Green Time:  0.0 20.7   0.0 16.1 36.8   0.0 30.2 30.2  30.2  0.0  0.0   0.0
Volume/Cap: 0.00 0.48  0.00 0.48 0.29  0.00 0.09 0.09  0.48 0.00 0.00  0.00
Delay/Veh:   0.0 23.3   0.0 27.2 11.8   0.0 14.4 14.4  17.3  0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:  0.0 23.3   0.0 27.2 11.8   0.0 14.4 14.4  17.3  0.0  0.0   0.0
LOS by Move:   A    C     A    C   B+     A    B    B     B    A    A     A
HCM2kAvgQ:     0    5     0    4    4     0    1    1     7    0    0     0
******************************************************************************
Note: Queue reported is the number of cars per lane.
******************************************************************************


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                       AM Peak Hour - 2019 No Project
                   South San Francisco Bay Shoreline Study
                              City of San Jose
------------------------------------------------------------------------------
                     Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
******************************************************************************
Intersection #6 237/FIRST (N)
******************************************************************************
Cycle (sec):          93             Critical Vol./Cap.(X):         0.293
Loss Time (sec):       9             Average Delay (sec/veh):        19.8
Optimal Cycle:        36             Level Of Service:                 B-
******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:           Include          Include          Include            Ovl
Min. Green:    7   10     0    0   10    10    0    0     0   10   10    10
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:       2  0  2  0  0   0  0  1  1  0   0  0  0  0  0   1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    330  600     0    0  307    69    0    0     0  207    1   171
Growth Adj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse: 330  600     0    0  307    69    0    0     0  207    1   171
User Adj:   1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:  330  600     0    0  307    69    0    0     0  207    1   171
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol: 330  600     0    0  307    69    0    0     0  207    1   171
PCE Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume: 330  600     0    0  307    69    0    0     0  207    1   171
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment: 0.83 1.00  0.92 0.92 1.00  0.92 0.92 1.00  0.92 0.92 1.00  0.92
Lanes:      2.00 2.00  0.00 0.00 1.61  0.39 0.00 0.00  0.00 1.99 0.01  1.00
Final Sat.: 3150 3800     0    0 3055   687    0    0     0 3484   17  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.10 0.16  0.00 0.00 0.10  0.10 0.00 0.00  0.00 0.06 0.06  0.10
Crit Moves: ****                 ****                       ****
Green Time: 29.0 56.9   0.0  0.0 27.9  27.9  0.0  0.0   0.0 27.1 27.1  27.1
Volume/Cap: 0.34 0.26  0.00 0.00 0.34  0.34 0.00 0.00  0.00 0.20 0.20  0.34
Delay/Veh:  25.5  8.6   0.0  0.0 26.2  26.2  0.0  0.0   0.0 25.3 25.3  27.7
User DelAdj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh: 25.5  8.6   0.0  0.0 26.2  26.2  0.0  0.0   0.0 25.3 25.3  27.7
LOS by Move:   C    A     A    A    C     C    A    A     A    C    C     C
HCM2kAvgQ:     4    4     0    0    4     4    0    0     0    2    2     4
******************************************************************************
Note: Queue reported is the number of cars per lane.
******************************************************************************


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PM 2019 No Project         Tue Feb 26, 2013 14:19:11                 Page 2-1
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                     PM Peak Hour - 2019 No Project
                 South San Francisco Bay Shoreline Study
                            City of San Jose
------------------------------------------------------------------------------
                   Level Of Service Computation Report
          2000 HCM Operations Method (Base Volume Alternative)
******************************************************************************
Intersection #6 237/FIRST (N)
******************************************************************************
Cycle (sec):          75              Critical Vol./Cap.(X):         0.660
Loss Time (sec):       9              Average Delay (sec/veh):        20.7
Optimal Cycle:        44              Level Of Service:                 C+
******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     7   10     0     0   10    10     0    0     0    10   10    10
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        2  0  2  0  0   0  0  1  1  0   0  0  0  0  0   1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     947  223     0     0  618   147     0    0     0   264    2    76
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  947  223     0     0  618   147     0    0     0   264    2    76
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   947  223     0     0  618   147     0    0     0   264    2    76
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  947  223     0     0  618   147     0    0     0   264    2    76
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  947  223     0     0  618   147     0    0     0   264    2    76
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.83 1.00  0.92  0.92 1.00  0.92  0.92 1.00  0.92  0.92 1.00  0.92
Lanes:       2.00 2.00  0.00  0.00 1.59  0.41  0.00 0.00  0.00  1.99 0.01  1.00
Final Sat.:  3150 3800     0     0 3020   718     0    0     0  3476   26  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.30 0.06  0.00  0.00 0.20  0.20  0.00 0.00  0.00  0.08 0.08  0.04
Crit Moves:  ****                  ****                              ****
Green Time:  33.3 56.0   0.0   0.0 22.7  22.7   0.0  0.0   0.0  10.0 10.0  10.0
Volume/Cap:  0.68 0.08  0.00  0.00 0.68  0.68  0.00 0.00  0.00  0.57 0.57  0.33
Delay/Veh:   17.9  2.6   0.0   0.0 24.6  24.6   0.0  0.0   0.0  32.2 32.2  30.3
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  17.9  2.6   0.0   0.0 24.6  24.6   0.0  0.0   0.0  32.2 32.2  30.3
LOS by Move:    B    A     A     A    C     C     A    A     A    C-   C-     C
HCM2kAvgQ:     10    1     0     0    9     9     0    0     0     4    4     2
******************************************************************************
Note: Queue reported is the number of cars per lane.
******************************************************************************


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                     AM Peak Hour - 2019 No Project
                 South San Francisco Bay Shoreline Study
                            City of San Jose
------------------------------------------------------------------------------
                   Level Of Service Computation Report
          2000 HCM Operations Method (Base Volume Alternative)
******************************************************************************
Intersection #7 237/FIRST (S)
******************************************************************************
Cycle (sec):         158              Critical Vol./Cap.(X):         0.552
Loss Time (sec):      12              Average Delay (sec/veh):        44.9
Optimal Cycle:        49              Level Of Service:                  D
******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:            Ignore          Include          Include           Ignore
Min. Green:     7   10    10     7   10    10    10   10    10    10   10    10
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        1  0  2  0  1   1  0  2  1  0   1  0  0  1  0   1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       5  674   309   121  420     7    29   11    19   862    3   117
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    5  674   309   121  420     7    29   11    19   862    3   117
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
PHF Volume:     5  674     0   121  420     7    29   11    19   862    3     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    5  674     0   121  420     7    29   11    19   862    3     0
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
FinalVolume:    5  674     0   121  420     7    29   11    19   862    3     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.92 1.00  0.92  0.92 1.00  0.92  0.92 1.00  0.92  0.92 1.00  0.92
Lanes:       1.00 2.00  1.00  1.00 2.95  0.05  1.00 0.35  0.65  1.99 0.01  1.00
Final Sat.:  1750 3800  1750  1750 5599    93  1750  661  1141  3489   12  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.18  0.00  0.07 0.08  0.08  0.02 0.02  0.02  0.25 0.25  0.00
Crit Moves:       ****        ****                  ****        ****
Green Time:  25.2 48.9   0.0  19.1 42.7  42.7  10.0 10.0  10.0  68.1 68.1   0.0
Volume/Cap:  0.02 0.57  0.00  0.57 0.28  0.28  0.26 0.26  0.26  0.57 0.57  0.00
Delay/Veh:   56.1 47.8   0.0  76.5 45.9  45.9  76.2 76.0  76.0  35.6 35.6   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  56.1 47.8   0.0  76.5 45.9  45.9  76.2 76.0  76.0  35.6 35.6   0.0
LOS by Move:   E+    D     A    E-    D     D    E-   E-    E-    D+   D+     A
HCM2kAvgQ:      0   14     0     6    5     5     2    2     2    17   17     0
******************************************************************************
Note: Queue reported is the number of cars per lane.
******************************************************************************


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-------------------------------------------------------------------------------
                        PM Peak Hour - 2019 No Project
                    South San Francisco Bay Shoreline Study
                               City of San Jose
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
*******************************************************************************
Intersection #7 237/FIRST (S)
*******************************************************************************
Cycle (sec):          77               Critical Vol./Cap.(X):         0.544
Loss Time (sec):      12               Average Delay (sec/veh):        21.8
Optimal Cycle:        49               Level Of Service:                 C+
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:           Ignore           Include          Include          Include
Min. Green:     7   10    10     7   10    10    10   10    10    10   10    10
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        1  0  2  0  1    2  0  2  1  0    1  0  0  1  0    1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      40 1107   537   216  686    11     3    5    10   314    5    34
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   40 1107   537   216  686    11     3    5    10   314    5    34
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    40 1107     0   216  686    11     3    5    10   314    5    34
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   40 1107     0   216  686    11     3    5    10   314    5    34
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   40 1107     0   216  686    11     3    5    10   314    5    34
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.92 1.00  0.92  0.83 1.00  0.92  0.92 1.00  0.92  0.92 1.00  0.92
Lanes:       1.00 2.00  1.00  2.00 2.95  0.05  1.00 0.32  0.68  1.97 0.03  1.00
Final Sat.:  1750 3800  1750  3150 5602    90  1750  599  1198  3449   55  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.29  0.00  0.07 0.12  0.12  0.00 0.01  0.01  0.09 0.09  0.02
Crit Moves:       ****        ****                  ****              ****
Green Time:  18.1 35.5   0.0   8.4 25.8  25.8  10.0 10.0  10.0  11.1 11.1  11.1
Volume/Cap:  0.10 0.63  0.00  0.63 0.37  0.37  0.01 0.06  0.06  0.63 0.63  0.13
Delay/Veh:   23.2 16.5   0.0  36.6 19.5  19.5  29.2 29.5  29.5  33.6 33.6  29.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  23.2 16.5   0.0  36.6 19.5  19.5  29.2 29.5  29.5  33.6 33.6  29.0
LOS by Move:    C    B     A    D+   B-    B-     C    C     C    C-   C-     C
HCM2kAvgQ:      1   10     0     3    4     4     0    0     0     5    5     1
*******************************************************************************
Note: Queue reported is the number of cars per lane.
*******************************************************************************
```

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AM 2019 plus Project OptionTue Mar 5, 2013 11:04:27                 Page 3-1
--------------------------------------------------------------------------------
           AM Peak Hour - 2019 plus Project East of Artesian Slough
                    South San Francisco Bay Shoreline Study
                               City of San Jose
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
             2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Dixon Landing Rd/McCarthy Blvd
********************************************************************************
Cycle (sec):        100               Critical Vol./Cap.(X):        0.410
Loss Time (sec):     12               Average Delay (sec/veh):       13.3
Optimal Cycle:       36               Level Of Service:                 B
********************************************************************************
Street Name:            McCarthy Blvd              Dixon Landing Rd
Approach:       North Bound       South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected         Protected         Protected         Protected
Rights:           Include           Include           Include           Include
Min. Green:     0    0    0      0    0    0      0    0    0      0    0    0
Y+R:          4.0  4.0  4.0    4.0  4.0  4.0    4.0  4.0  4.0    4.0  4.0  4.0
Lanes:         1  0  0  0  2    0  0  0  0  0    0  0  0  1  0    2  0  1  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      11    0   135     0    0     0     0   59    14   938   96     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   11    0   135     0    0     0     0   59    14   938   96     0
Added Vol:      0    0     0     0    0     0     0    0     0    20    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   11    0   135     0    0     0     0   59    14   958   96     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    11    0   135     0    0     0     0   59    14   958   96     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   11    0   135     0    0     0     0   59    14   958   96     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   11    0   135     0    0     0     0   59    14   958   96     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.95 1.00  0.75  1.00 1.00  1.00  1.00 0.97  0.97  0.92 1.00  1.00
Lanes:       1.00 0.00  2.00  0.00 0.00  0.00  0.00 0.81  0.19  2.00 1.00  0.00
Final Sat.:  1805    0  2842     0    0     0     0 1496   355  3502 1900     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.00  0.05  0.00 0.00  0.00  0.00 0.04  0.04  0.27 0.05  0.00
Crit Moves:             ****                        ****        ****
Green/Cycle: 0.12 0.00  0.12  0.00 0.00  0.00  0.00 0.10  0.10  0.67 0.76  0.00
Volume/Cap:  0.05 0.00  0.41  0.00 0.00  0.00  0.00 0.41  0.41  0.41 0.07  0.00
Delay/Veh:   39.4  0.0  41.9   0.0  0.0   0.0   0.0 44.0  44.0   7.7  3.0   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  39.4  0.0  41.9   0.0  0.0   0.0   0.0 44.0  44.0   7.7  3.0   0.0
LOS by Move:    D    A     D     A    A     A     A    D     D     A    A     A
HCM2k95thQ:     1    0     5     0    0     0     0    5     5    13    2     0
********************************************************************************

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AM 2019 plus Project OptionTue Mar 5, 2013 11:04:27                 Page 4-1
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           AM Peak Hour - 2019 plus Project East of Artesian Slough
                    South San Francisco Bay Shoreline Study
                               City of San Jose
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
             2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #2 I-880 SB Ramps/Dixon Landing Rd
********************************************************************************
Cycle (sec):        100               Critical Vol./Cap.(X):        0.378
Loss Time (sec):      8               Average Delay (sec/veh):       14.6
Optimal Cycle:       26               Level Of Service:                 B
********************************************************************************
Street Name:           Dixon Landing Rd                  I-880 SB Ramps
Approach:       North Bound       South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected         Protected         Protected         Protected
Rights:           Include           Include            Ignore            Ignore
Min. Green:     0    0    0      0    0    0      0    0    0      0    0    0
Y+R:          4.0  4.0  4.0    4.0  4.0  4.0    4.0  4.0  4.0    4.0  4.0  4.0
Lanes:         0  0  0  0  0    2  0  0  0  2    0  0  3  0  1    0  0  2  0  2
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0   205    0   279     0  189    32     0  878  1540
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0   205    0   279     0  189    32     0  878  1540
Added Vol:      0    0     0     0    0     7     0    0     0     0   13     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0     0   205    0   286     0  189    32     0  891  1540
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:     0    0     0   205    0   286     0  189     0     0  891     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0    0     0   205    0   286     0  189     0     0  891     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
FinalVolume:    0    0     0   205    0   286     0  189     0     0  891     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  0.92 1.00  0.75  1.00 0.91  1.00  1.00 0.95  0.88
Lanes:       0.00 0.00  0.00  2.00 0.00  2.00  0.00 3.00  1.00  0.00 2.00  2.00
Final Sat.:     0    0     0  3502    0  2842     0 5187  1900     0 3610  3344
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.06 0.00  0.10  0.00 0.04  0.00  0.00 0.25  0.00
Crit Moves:                               ****  ****                  ****
Green/Cycle: 0.00 0.00  0.00  0.27 0.00  0.27  0.00 0.65  0.00  0.00 0.65  0.00
Volume/Cap:  0.00 0.00  0.00  0.22 0.00  0.38  0.00 0.06  0.00  0.00 0.38  0.00
Delay/Veh:    0.0  0.0   0.0  28.7  0.0  30.2   0.0  6.2   0.0   0.0  8.1   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0  28.7  0.0  30.2   0.0  6.2   0.0   0.0  8.1   0.0
LOS by Move:    A    A     A     C    A     C     A    A     A     A    A     A
HCM2k95thQ:     0    0     0     5    0     8     0    2     0     0   12     0
********************************************************************************

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AM 2019 plus Project OptionTue Mar 5, 2013 11:04:27                  Page 5-1
--------------------------------------------------------------------------------
           AM Peak Hour - 2019 plus Project East of Artesian Slough
                    South San Francisco Bay Shoreline Study
                               City of San Jose
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #3 I-880 NB Ramp-California Cir/Dixon Landing Rd
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):        0.826
Loss Time (sec):      16              Average Delay (sec/veh):        21.9
Optimal Cycle:       93              Level Of Service:                  C
********************************************************************************
Street Name:         Dixon Landing Rd            I-880 NB Ramp-California Cir
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected        Protected
Rights:            Ovl            Include          Include          Include
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        1  1  0  0  2    1  0  0  1  1    0  0  3  0  1    1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     232   35   618    17    0    55     0  376   138    61 2019   449
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  232   35   618    17    0    55     0  376   138    61 2019   449
Added Vol:      0    0     0     0    0    13     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  232   35   618    17    0    68     0  376   138    61 2019   449
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   232   35   618    17    0    68     0  376   138    61 2019   449
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  232   35   618    17    0    68     0  376   138    61 2019   449
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  232   35   618    17    0    68     0  376   138    61 2019   449
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.96 0.96  0.75  0.95 1.00  0.85  1.00 0.91  0.85  0.95 0.89  0.89
Lanes:       1.74 0.26  2.00  1.00 0.00  2.00  0.00 3.00  1.00  1.00 2.45  0.55
Final Sat.:  3163  477  2842  1805    0  3230     0 5187  1615  1805 4129   918
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.07 0.07  0.22  0.01 0.00  0.02  0.00 0.07  0.09  0.03 0.49  0.49
Crit Moves:             ****              ****  ****                   ****
Green/Cycle: 0.22 0.22  0.39  0.03 0.00  0.03  0.00 0.42  0.42  0.17 0.59  0.59
Volume/Cap:  0.33 0.33  0.56  0.37 0.00  0.83  0.00 0.17  0.20  0.20 0.83  0.83
Delay/Veh:   32.9 32.9  24.4  52.9  0.0  95.3   0.0 17.9  18.3  36.2 18.3  18.3
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  32.9 32.9  24.4  52.9  0.0  95.3   0.0 17.9  18.3  36.2 18.3  18.3
LOS by Move:    C    C     C     D    A     F     A    B     B     D    B     B
HCM2k95thQ:     7    7    16     2    0     5     0    5     5     3   40    40
********************************************************************************

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PM 2019 plus Project E of AFri Mar 1, 2013 13:42:46            Page 2-1
--------------------------------------------------------------------------------
           PM Peak Hour - 2019 plus Project East of Artesian Slough
                    South San Francisco Bay Shoreline Study
                               City of San Jose
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
             2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #4 237/ZANKER (N)
********************************************************************************
Cycle (sec):          71               Critical Vol./Cap.(X):         0.251
Loss Time (sec):       9               Average Delay (sec/veh):        13.6
Optimal Cycle:        36               Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:           Ignore          Include          Include          Include
Min. Green:     0   10    10    7   10     0    0    0     0   10    0    10
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        0  0  2  0  1   1  0  1  0  0   0  0  0  0  0   2  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  151   704   35  188     0    0    0     0  491    0    98
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:    0  151   704   35  188     0    0    0     0  491    0    98
Added Vol:      0    0     0    7   13     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    0  151   704   42  201     0    0    0     0  491    0    98
User Adj:    1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:     0  151     0   42  201     0    0    0     0  491    0    98
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:    0  151     0   42  201     0    0    0     0  491    0    98
PCE Adj:     1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:    0  151     0   42  201     0    0    0     0  491    0    98
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment:  0.92 1.00  0.92 0.92 1.00  0.92 0.92 1.00  0.92 0.83 1.00  0.92
Lanes:       0.00 2.00  1.00 1.00 1.00  0.00 0.00 0.00  0.00 2.00 0.00  1.00
Final Sat.:     0 3800  1750 1750 1900     0    0    0     0 3150    0  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.04  0.00 0.02 0.11  0.00 0.00 0.00  0.00 0.16 0.00  0.06
Crit Moves:       ****       ****                            ****
Green Time:   0.0 11.2   0.0  7.0 18.2   0.0  0.0  0.0   0.0 43.8  0.0  43.8
Volume/Cap:  0.00 0.25  0.00 0.24 0.41  0.00 0.00 0.00  0.00 0.25 0.00  0.09
Delay/Veh:    0.0 26.5   0.0 30.3 22.6   0.0  0.0  0.0   0.0  6.2  0.0   5.5
User DelAdj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:   0.0 26.5   0.0 30.3 22.6   0.0  0.0  0.0   0.0  6.2  0.0   5.5
LOS by Move:    A    C     A    C   C+     A    A    A     A    A    A     A
HCM2kAvgQ:      0    1     0    1    4     0    0    0     0    3    0     1
********************************************************************************
Note: Queue reported is the number of cars per lane.

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PM 2019 plus Project E of AFri Mar 1, 2013 13:42:46            Page 3-1
--------------------------------------------------------------------------------
           PM Peak Hour - 2019 plus Project East of Artesian Slough
                    South San Francisco Bay Shoreline Study
                               City of San Jose
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
             2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #5 237/ZANKER (S)
********************************************************************************
Cycle (sec):          76               Critical Vol./Cap.(X):         0.486
Loss Time (sec):       9               Average Delay (sec/veh):        19.0
Optimal Cycle:        36               Level Of Service:                 B-
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:           Ignore          Include          Include          Include
Min. Green:     0   10    10    7   10     0   10   10    10    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:        0  0  3  0  1   1  0  2  0  0   0  1  0  0  2   0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  742   746  177  529     0   59    2   597    0    0     0
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:    0  742   746  177  529     0   59    2   597    0    0     0
Added Vol:      0    0     0   13    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    0  742   746  190  529     0   59    2   597    0    0     0
User Adj:    1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:     0  742     0  190  529     0   59    2   597    0    0     0
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:    0  742     0  190  529     0   59    2   597    0    0     0
PCE Adj:     1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:    0  742     0  190  529     0   59    2   597    0    0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment:  0.92 1.00  0.92 0.92 1.00  0.92 0.92 1.00  0.83 0.92 1.00  0.92
Lanes:       0.00 3.00  1.00 1.00 2.00  0.00 0.97 0.03  2.00 0.00 0.00  0.00
Final Sat.:     0 5700  1750 1750 3800     0 1697   58  3150    0    0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.13  0.00 0.11 0.14  0.00 0.03 0.03  0.19 0.00 0.00  0.00
Crit Moves:       ****       ****                     ****
Green Time:   0.0 20.4   0.0 17.0 37.4   0.0 29.6 29.6  29.6  0.0  0.0   0.0
Volume/Cap:  0.00 0.49  0.00 0.49 0.28  0.00 0.09 0.09  0.49 0.00 0.00  0.00
Delay/Veh:    0.0 23.7   0.0 26.7 11.5   0.0 14.7 14.7  17.7  0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:   0.0 23.7   0.0 26.7 11.5   0.0 14.7 14.7  17.7  0.0  0.0   0.0
LOS by Move:    A    C     A    C   B+     A    B    B     B    A    A     A
HCM2kAvgQ:      0    5     0    4    4     0    1    1     7    0    0     0
********************************************************************************
Note: Queue reported is the number of cars per lane.

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AM 2019 plus Project W of AFri Mar 1, 2013 13:24:10                 Page 2-1
--------------------------------------------------------------------------------
          AM Peak Hour - 2019 plus Project West of Artesian Slough
                   South San Francisco Bay Shoreline Study
                              City of San Jose
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #6 237/FIRST (N)
********************************************************************************
Cycle (sec):          93             Critical Vol./Cap.(X):         0.293
Loss Time (sec):       9             Average Delay (sec/veh):        20.1
Optimal Cycle:        36             Level Of Service:                 C+
********************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:           Include          Include          Include            Ovl
Min. Green:     7   10     0    0   10    10    0    0     0   10   10    10
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         2  0  2  0  0   0  0  1  1  0   0  0  0  0  0   1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     330  600     0    0  307    69    0    0     0  207    1   171
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:  330  600     0    0  307    69    0    0     0  207    1   171
Added Vol:      0    7     0    0    0     0    0    0     0    0    0    13
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  330  607     0    0  307    69    0    0     0  207    1   184
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:   330  607     0    0  307    69    0    0     0  207    1   184
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  330  607     0    0  307    69    0    0     0  207    1   184
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:  330  607     0    0  307    69    0    0     0  207    1   184
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment:  0.83 1.00  0.92 0.92 1.00  0.92 0.92 1.00  0.92 0.92 1.00  0.92
Lanes:       2.00 2.00  0.00 0.00 1.61  0.39 0.00 0.00  0.00 1.99 0.01  1.00
Final Sat.:  3150 3800     0    0 3055   687    0    0     0 3484   17  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.10 0.16  0.00 0.00 0.10  0.10 0.00 0.00  0.00 0.06 0.06  0.11
Crit Moves:  ****                 ****                            ****
Green Time:  28.3 55.5   0.0  0.0 27.2  27.2  0.0  0.0   0.0 28.5 28.5  28.5
Volume/Cap:  0.34 0.27  0.00 0.00 0.34  0.34 0.00 0.00  0.00 0.19 0.19  0.34
Delay/Veh:   26.1  9.3   0.0  0.0 26.7  26.7  0.0  0.0   0.0 24.2 24.2  26.8
User DelAdj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:  26.1  9.3   0.0  0.0 26.7  26.7  0.0  0.0   0.0 24.2 24.2  26.8
LOS by Move:    C    A     A    A    C     C    A    A     A    C    C     C
HCM2kAvgQ:      4    4     0    0    4     4    0    0     0    2    2     5
********************************************************************************
Note: Queue reported is the number of cars per lane.

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PM 2019 plus Project W of ATue Mar 5, 2013 11:25:53                 Page 2-1
--------------------------------------------------------------------------------
          PM Peak Hour - 2019 plus Project West of Artesian Slough
                   South San Francisco Bay Shoreline Study
                              City of San Jose
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #6 237/FIRST (N)
********************************************************************************
Cycle (sec):          75             Critical Vol./Cap.(X):         0.667
Loss Time (sec):       9             Average Delay (sec/veh):        20.9
Optimal Cycle:        45             Level Of Service:                 C+
********************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     7   10     0    0   10    10    0    0     0   10   10    10
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         2  0  2  0  0   0  0  1  1  0   0  0  0  0  0   1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     947  223     0    0  618   147    0    0     0  264    2    76
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:  947  223     0    0  618   147    0    0     0  264    2    76
Added Vol:      0    0     0    0   13     7    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  947  223     0    0  631   154    0    0     0  264    2    76
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:   947  223     0    0  631   154    0    0     0  264    2    76
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  947  223     0    0  631   154    0    0     0  264    2    76
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:  947  223     0    0  631   154    0    0     0  264    2    76
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment:  0.83 1.00  0.92 0.92 1.00  0.92 0.92 1.00  0.92 0.92 1.00  0.92
Lanes:       2.00 2.00  0.00 0.00 1.58  0.42 0.00 0.00  0.00 1.99 0.01  1.00
Final Sat.:  3150 3800     0    0 3004   733    0    0     0 3476   26  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.30 0.06  0.00 0.00 0.21  0.21 0.00 0.00  0.00 0.08 0.08  0.04
Crit Moves:  ****                 ****                            ****
Green Time:  33.0 56.0   0.0  0.0 23.0  23.0  0.0  0.0   0.0 10.0 10.0  10.0
Volume/Cap:  0.68 0.08  0.00 0.00 0.68  0.68 0.00 0.00  0.00 0.57 0.57  0.33
Delay/Veh:   18.3  2.6   0.0  0.0 24.5  24.5  0.0  0.0   0.0 32.2 32.2  30.3
User DelAdj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:  18.3  2.6   0.0  0.0 24.5  24.5  0.0  0.0   0.0 32.2 32.2  30.3
LOS by Move:   B-    A     A    A    C     C    A    A     A   C-   C-     C
HCM2kAvgQ:     10    1     0    0    9     9    0    0     0    4    4     2
********************************************************************************
Note: Queue reported is the number of cars per lane.

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AM 2019 plus Project W of AFri Mar 1, 2013 13:24:10              Page 3-1
--------------------------------------------------------------------------------
           AM Peak Hour - 2019 plus Project West of Artesian Slough
                   South San Francisco Bay Shoreline Study
                              City of San Jose
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #7 237/FIRST (S)
********************************************************************************
Cycle (sec):         158               Critical Vol./Cap.(X):        0.552
Loss Time (sec):      12               Average Delay (sec/veh):       44.9
Optimal Cycle:        49               Level Of Service:                 D
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected       Split Phase      Split Phase
Rights:          Ignore           Include         Include          Ignore
Min. Green:     7   10    10     7   10    10    10   10    10    10   10    10
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        1  0  2  0  1   1  0  2  1  0   1  0  0  1  0   1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       5  674   309   121  420     7    29   11    19   862    3   117
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    5  674   309   121  420     7    29   11    19   862    3   117
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     7
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    5  674   309   121  420     7    29   11    19   862    3   124
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
PHF Volume:     5  674     0   121  420     7    29   11    19   862    3     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    5  674     0   121  420     7    29   11    19   862    3     0
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
FinalVolume:    5  674     0   121  420     7    29   11    19   862    3     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.92 1.00  0.92  0.92 1.00  0.92  0.92 1.00  0.92  0.92 1.00  0.92
Lanes:       1.00 2.00  1.00  1.00 2.95  0.05  1.00 0.35  0.65  1.99 0.01  1.00
Final Sat.:  1750 3800  1750  1750 5599    93  1750  661  1141  3489   12  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.18  0.00  0.07 0.08  0.08  0.02 0.02  0.02  0.25 0.25  0.00
Crit Moves:       ****        ****                   ****        ****
Green Time:  25.2 48.9   0.0  19.1 42.7  42.7  10.0 10.0  10.0  68.1 68.1   0.0
Volume/Cap:  0.02 0.57  0.00  0.57 0.28  0.28  0.26 0.26  0.26  0.57 0.57  0.00
Delay/Veh:   56.1 47.8   0.0  76.5 45.9  45.9  76.2 76.0  76.0  35.6 35.6   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  56.1 47.8   0.0  76.5 45.9  45.9  76.2 76.0  76.0  35.6 35.6   0.0
LOS by Move:   E+    D     A    E-    D     D    E-   E-    E-    D+   D+     A
HCM2kAvgQ:      0   14     0     6    5     5     2    2     2    17   17     0
********************************************************************************
Note: Queue reported is the number of cars per lane.

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PM 2019 plus Project W of ATue Mar 5, 2013 11:25:53              Page 3-1
--------------------------------------------------------------------------------
           PM Peak Hour - 2019 plus Project West of Artesian Slough
                   South San Francisco Bay Shoreline Study
                              City of San Jose
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
          2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #7 237/FIRST (S)
********************************************************************************
Cycle (sec):          77               Critical Vol./Cap.(X):        0.549
Loss Time (sec):      12               Average Delay (sec/veh):       22.0
Optimal Cycle:        49               Level Of Service:                C+
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Protected        Protected       Split Phase      Split Phase
Rights:          Ignore           Include         Include          Include
Min. Green:     7   10    10     7   10    10    10   10    10    10   10    10
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        1  0  2  0  1   2  0  2  1  0   1  0  0  1  0   1  1  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      40 1107   537   216  686    11     3    5    10   314    5    34
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   40 1107   537   216  686    11     3    5    10   314    5    34
Added Vol:      0    0     0    13    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   40 1107   537   229  686    11     3    5    10   314    5    34
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    40 1107     0   229  686    11     3    5    10   314    5    34
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   40 1107     0   229  686    11     3    5    10   314    5    34
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   40 1107     0   229  686    11     3    5    10   314    5    34
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.92 1.00  0.92  0.83 1.00  0.92  0.92 1.00  0.92  0.92 1.00  0.92
Lanes:       1.00 2.00  1.00  2.00 2.95  0.05  1.00 0.32  0.68  1.97 0.03  1.00
Final Sat.:  1750 3800  1750  3150 5602    90  1750  599  1198  3449   55  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.29  0.00  0.07 0.12  0.12  0.00 0.01  0.01  0.09 0.09  0.02
Crit Moves:       ****        ****                   ****        ****
Green Time:  18.1 35.2   0.0   8.8 25.9  25.9  10.0 10.0  10.0  11.0 11.0  11.0
Volume/Cap:  0.10 0.64  0.00  0.64 0.36  0.36  0.01 0.06  0.06  0.64 0.64  0.14
Delay/Veh:   23.1 16.8   0.0  36.4 19.5  19.5  29.2 29.5  29.5  33.8 33.8  29.1
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  23.1 16.8   0.0  36.4 19.5  19.5  29.2 29.5  29.5  33.8 33.8  29.1
LOS by Move:    C    B     A    D+   B-    B-     C    C     C    C-   C-     C
HCM2kAvgQ:      1   10     0     3    4     4     0    0     0     5    5     1
********************************************************************************
Note: Queue reported is the number of cars per lane.

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AM 2024 No Project         Wed Feb 27, 2013 14:33:54                 Page 2-1
--------------------------------------------------------------------------------
                        AM Peak Hour - 2024 No Project
                    South San Francisco Bay Shoreline Study
                               City of San Jose
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #1 Dixon Landing Rd/McCarthy Blvd-Fremont Blvd Ext
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):          0.510
Loss Time (sec):       12               Average Delay (sec/veh):         15.2
Optimal Cycle:         41               Level Of Service:                   B
********************************************************************************
Street Name:  McCarthy Blvd-Fremont Blvd Ext           Dixon Landing Rd
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:           Ignore           Include          Include             Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        1  0  1  0  1    2  0  1  1  0    1  0  0  1  0    1  1  0  0  2
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      15   18   437   244   14     0     0   63    17  1059  126   322
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   15   18   437   244   14     0     0   63    17  1059  126   322
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    15   18     0   244   14     0     0   63    17  1059  126   322
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   15   18     0   244   14     0     0   63    17  1059  126   322
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   15   18     0   244   14     0     0   63    17  1059  126   322
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.95 1.00  1.00  0.92 0.95  0.95  1.00 0.97  0.97  0.96 0.96  0.75
Lanes:       1.00 1.00  1.00  2.00 2.00  0.00  1.00 0.79  0.21  1.79 0.21  2.00
Final Sat.:  1805 1900  1900  3502 3610     0  1900 1448   391  3250  387  2842
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.01  0.00  0.07 0.00  0.00  0.00 0.04  0.04  0.33 0.33  0.11
Crit Moves:       ****        ****                  ****        ****
Green/Cycle: 0.11 0.02  0.00  0.14 0.05  0.00  0.00 0.09  0.09  0.64 0.64  0.78
Volume/Cap:  0.08 0.51  0.00  0.51 0.08  0.00  0.00 0.51  0.51  0.51 0.51  0.15
Delay/Veh:   40.5 60.5   0.0  41.0 45.5   0.0   0.0 46.5  46.5   9.8  9.8   2.9
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  40.5 60.5   0.0  41.0 45.5   0.0   0.0 46.5  46.5   9.8  9.8   2.9
LOS by Move:    D    E     A     D    D     A     A    D     D     A    A     A
HCM2k95thQ:     1    3     0     8    1     0     0    6     6    18   18     3
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************


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AM 2024 No Project         Wed Feb 27, 2013 14:33:54                 Page 3-1
--------------------------------------------------------------------------------
                        AM Peak Hour - 2024 No Project
                    South San Francisco Bay Shoreline Study
                               City of San Jose
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #2 I-880 SB Ramps/Dixon landing Rd
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):          0.576
Loss Time (sec):        8               Average Delay (sec/veh):         13.3
Optimal Cycle:         37               Level Of Service:                   B
********************************************************************************
Street Name:         Dixon Landing Rd                   I-880 SB Ramps
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:           Include          Include          Ignore           Ignore
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        0  0  0  0  0    2  0  0  0  2    0  0  3  0  1    0  0  2  0  2
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0   190    0   383     0  623   163     0 1426  1807
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0   190    0   383     0  623   163     0 1426  1807
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:     0    0     0   190    0   383     0  623     0     0 1426     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0    0     0   190    0   383     0  623     0     0 1426     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
FinalVolume:    0    0     0   190    0   383     0  623     0     0 1426     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  0.92 1.00  0.75  1.00 0.91  1.00  1.00 0.95  0.88
Lanes:       0.00 0.00  0.00  2.00 0.00  2.00  0.00 3.00  1.00  0.00 2.00  2.00
Final Sat.:     0    0     0  3502    0  2842     0 5187  1900     0 3610  3344
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.05 0.00  0.13  0.00 0.12  0.00  0.00 0.40  0.00
Crit Moves:                              ****  ****                  ****
Green/Cycle: 0.00 0.00  0.00  0.23 0.00  0.23  0.00 0.69  0.00  0.00 0.69  0.00
Volume/Cap:  0.00 0.00  0.00  0.23 0.00  0.58  0.00 0.18  0.00  0.00 0.58  0.00
Delay/Veh:    0.0  0.0   0.0  31.2  0.0  35.2   0.0  5.6   0.0   0.0  8.5   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0  31.2  0.0  35.2   0.0  5.6   0.0   0.0  8.5   0.0
LOS by Move:    A    A     A     C    A     D     A    A     A     A    A     A
HCM2k95thQ:     0    0     0     5    0    13     0    5     0     0   20     0
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************


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AM 2024 No Project         Wed Feb 27, 2013 14:33:54                Page 4-1
--------------------------------------------------------------------------------
                        AM Peak Hour - 2024 No Project
                    South San Francisco Bay Shoreline Study
                               City of San Jose
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
             2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #3 I-880 NB Ramp-California Cir/Dixon landing Rd
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         1.076
Loss Time (sec):      16                Average Delay (sec/veh):        52.4
Optimal Cycle:       180                Level Of Service:                  D
********************************************************************************
Street Name:         Dixon Landing Rd           I-880 NB Ramp-California Cir
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected        Protected
Rights:            Ovl            Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:        1  1  0  0  2   1  0  0  1  1   0  0  3  0  1   1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     347   68   762    16    0   236     0  760   253    61 2400   602
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  347   68   762    16    0   236     0  760   253    61 2400   602
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   347   68   762    16    0   236     0  760   253    61 2400   602
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  347   68   762    16    0   236     0  760   253    61 2400   602
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  347   68   762    16    0   236     0  760   253    61 2400   602
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.96 0.96  0.75  0.95 1.00  0.85  1.00 0.91  0.85  0.95 0.88  0.88
Lanes:       1.67 0.33  2.00  1.00 0.00  2.00  0.00 3.00  1.00  1.00 2.40  0.60
Final Sat.:  3050  598  2842  1805    0  3230     0 5187  1615  1805 4022  1009
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.11 0.11  0.27  0.01 0.00  0.07  0.00 0.15  0.16  0.03 0.60  0.60
Crit Moves:             ****              ****  ****                   ****
Green/Cycle: 0.22 0.22  0.32  0.07 0.00  0.07  0.00 0.46  0.46  0.10 0.55  0.55
Volume/Cap:  0.52 0.52  0.85  0.13 0.00  1.08  0.00 0.32  0.34  0.34 1.08  1.08
Delay/Veh:   35.2 35.2  39.6  44.3  0.0 129.1   0.0 17.4  17.8  43.2 64.1  64.1
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  35.2 35.2  39.6  44.3  0.0 129.1   0.0 17.4  17.8  43.2 64.1  64.1
LOS by Move:    D    D     D     D    A     F     A    B     B     D    E     E
HCM2k95thQ:    12   12    27     1    0    15     0   10     9     4   74    74
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************


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PM 2024 No Project         Fri Mar 1, 2013 11:50:46                  Page 2-1
-------------------------------------------------------------------------------
                       PM Peak Hour - 2024 No Project
                   South San Francisco Bay Shoreline Study
                              City of San Jose
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
                2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #4 237/ZANKER (N)
********************************************************************************
Cycle (sec):           71                 Critical Vol./Cap.(X):        0.309
Loss Time (sec):        9                 Average Delay (sec/veh):       14.2
Optimal Cycle:         36                 Level Of Service:                 B
********************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected       Split Phase      Split Phase
Rights:            Ignore           Include          Include          Include
Min. Green:      0   10   10     7   10    0     0    0    0    10    0   10
Y+R:           4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
Lanes:          0  0  2  0  1   1  0  1  0  0   0  0  0  0  0   2  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  229  736    59  197    0     0    0    0   553    0  150
Growth Adj:   1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:     0  229  736    59  197    0     0    0    0   553    0  150
User Adj:     1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:      1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:      0  229    0    59  197    0     0    0    0   553    0  150
Reduct Vol:      0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:     0  229    0    59  197    0     0    0    0   553    0  150
PCE Adj:      1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:      1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:     0  229    0    59  197    0     0    0    0   553    0  150
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1900 1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900
Adjustment:   0.92 1.00 0.92  0.92 1.00 0.92  0.92 1.00 0.92  0.83 1.00 0.92
Lanes:        0.00 2.00 1.00  1.00 1.00 0.00  0.00 0.00 0.00  2.00 0.00 1.00
Final Sat.:      0 3800 1750  1750 1900    0     0    0    0  3150    0 1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.00 0.06 0.00  0.03 0.10 0.00  0.00 0.00 0.00  0.18 0.00 0.09
Crit Moves:        ****       ****                              ****
Green Time:    0.0 13.9  0.0   7.8 21.6  0.0   0.0  0.0  0.0  40.4  0.0 40.4
Volume/Cap:   0.00 0.31 0.00  0.31 0.34 0.00  0.00 0.00 0.00  0.31 0.00 0.15
Delay/Veh:     0.0 24.7  0.0  30.1 19.5  0.0   0.0  0.0  0.0   8.1  0.0  7.3
User DelAdj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
AdjDel/Veh:    0.0 24.7  0.0  30.1 19.5  0.0   0.0  0.0  0.0   8.1  0.0  7.3
LOS by Move:     A    C    A     C   B-    A     A    A    A     A    A    A
HCM2kAvgQ:       0    2    0     2    4    0     0    0    0     4    0    2
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************


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PM 2024 No Project         Fri Mar 1, 2013 11:50:46                  Page 3-1
-------------------------------------------------------------------------------
                       PM Peak Hour - 2024 No Project
                   South San Francisco Bay Shoreline Study
                              City of San Jose
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
                2000 HCM Operations Method (Base Volume Alternative)
********************************************************************************
Intersection #5 237/ZANKER (S)
********************************************************************************
Cycle (sec):           76                 Critical Vol./Cap.(X):        0.481
Loss Time (sec):        9                 Average Delay (sec/veh):       18.5
Optimal Cycle:         36                 Level Of Service:                B-
********************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Protected        Protected       Split Phase      Split Phase
Rights:            Ignore           Include          Include          Include
Min. Green:      0   10   10     7   10    0    10   10   10     0    0    0
Y+R:           4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
Lanes:          0  0  3  0  1   1  0  2  0  0   0  1  0  0  2   0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:        0  777  774   185  614    0    97    2  572     0    0    0
Growth Adj:   1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:     0  777  774   185  614    0    97    2  572     0    0    0
User Adj:     1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:      1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:      0  777    0   185  614    0    97    2  572     0    0    0
Reduct Vol:      0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:     0  777    0   185  614    0    97    2  572     0    0    0
PCE Adj:      1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:      1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:     0  777    0   185  614    0    97    2  572     0    0    0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1900 1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900
Adjustment:   0.92 1.00 0.92  0.92 1.00 0.92  0.92 1.00 0.83  0.92 1.00 0.92
Lanes:        0.00 3.00 1.00  1.00 2.00 0.00  0.98 0.02 2.00  0.00 0.00 0.00
Final Sat.:      0 5700 1750  1750 3800    0  1717   35 3150     0    0    0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.00 0.14 0.00  0.11 0.16 0.00  0.06 0.06 0.18  0.00 0.00 0.00
Crit Moves:        ****       ****                       ****
Green Time:    0.0 21.6  0.0  16.7 38.3  0.0  28.7 28.7 28.7   0.0  0.0  0.0
Volume/Cap:   0.00 0.48 0.00  0.48 0.32 0.00  0.15 0.15 0.48  0.00 0.00 0.00
Delay/Veh:     0.0 22.8  0.0  26.8 11.3  0.0  15.7 15.7 18.3   0.0  0.0  0.0
User DelAdj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
AdjDel/Veh:    0.0 22.8  0.0  26.8 11.3  0.0  15.7 15.7 18.3   0.0  0.0  0.0
LOS by Move:     A   C+    A     C   B+    A     B    B   B-     A    A    A
HCM2kAvgQ:       0    5    0     4    4    0     2    2    6     0    0    0
********************************************************************************
Note: Queue reported is the number of cars per lane.
********************************************************************************


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AM 2024 plus Project OptionTue Mar 5, 2013 11:30:37                  Page 2-1
--------------------------------------------------------------------------------
           AM Peak Hour - 2024 plus Project East of Artesian Slough
                    South San Francisco Bay Shoreline Study
                               City of San Jose
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Dixon Landing Rd/McCarthy Blvd-Fremont Blvd Ext
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.516
Loss Time (sec):      12                Average Delay (sec/veh):        15.2
Optimal Cycle:        42                Level Of Service:                  B
********************************************************************************
Street Name:  McCarthy Blvd-Fremont Blvd Ext           Dixon Landing Rd
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:           Ignore           Include         Include            Ovl
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Y+R:         4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
Lanes:       1  0  1  0  1   2  0  1  1  0   1  0  0  1  0   1  1  0  0  2
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     15   18  437   244   14    0     0   63   17  1059  126  322
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:  15   18  437   244   14    0     0   63   17  1059  126  322
Added Vol:     0    0    0     0    0    0     0    0    0    20    0    0
PasserByVol:   0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:  15   18  437   244   14    0     0   63   17  1079  126  322
User Adj:    1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:   15   18    0   244   14    0     0   63   17  1079  126  322
Reduct Vol:    0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:  15   18    0   244   14    0     0   63   17  1079  126  322
PCE Adj:     1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 0.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:  15   18    0   244   14    0     0   63   17  1079  126  322
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900
Adjustment:  0.95 1.00 1.00  0.92 0.95 0.95  1.00 0.97 0.97  0.96 0.96 0.75
Lanes:       1.00 1.00 1.00  2.00 2.00 0.00  1.00 0.79 0.21  1.79 0.21 2.00
Final Sat.:  1805 1900 1900  3502 3610    0  1900 1448  391  3256  380 2842
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.01 0.00  0.07 0.00 0.00  0.00 0.04 0.04  0.33 0.33 0.11
Crit Moves:       ****       ****                  ****      ****
Green/Cycle: 0.10 0.02 0.00  0.14 0.05 0.00  0.00 0.08 0.08  0.64 0.64 0.78
Volume/Cap:  0.08 0.52 0.00  0.52 0.08 0.00  0.00 0.52 0.52  0.52 0.52 0.15
Delay/Veh:   40.6 61.4  0.0  41.2 45.6  0.0   0.0 46.8 46.8   9.8  9.8  2.8
User DelAdj: 1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
AdjDel/Veh:  40.6 61.4  0.0  41.2 45.6  0.0   0.0 46.8 46.8   9.8  9.8  2.8
LOS by Move:    D    E    A     D    D    A     A    D    D     A    A    A
HCM2k95thQ:     1    3    0     8    1    0     0    6    6    18   18    3
********************************************************************************

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AM 2024 plus Project OptionTue Mar 5, 2013 11:30:37                  Page 3-1
--------------------------------------------------------------------------------
           AM Peak Hour - 2024 plus Project East of Artesian Slough
                    South San Francisco Bay Shoreline Study
                               City of San Jose
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #2 I-880 SB Ramps/Dixon landing Rd
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.582
Loss Time (sec):       8                Average Delay (sec/veh):        13.5
Optimal Cycle:        37                Level Of Service:                  B
********************************************************************************
Street Name:          Dixon Landing Rd                     I-880 SB Ramps
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected        Protected        Protected
Rights:           Include          Include          Ignore           Ignore
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Y+R:         4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0
Lanes:       0  0  0  0  0   2  0  0  0  2   0  0  3  0  1   0  0  2  0  2
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0    0    0   190    0  383     0  623  163     0 1426 1807
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:   0    0    0   190    0  383     0  623  163     0 1426 1807
Added Vol:     0    0    0     0    0    7     0    0    0     0   13    0
PasserByVol:   0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:   0    0    0   190    0  390     0  623  163     0 1439 1807
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 0.00  1.00 1.00 0.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 0.00  1.00 1.00 0.00
PHF Volume:    0    0    0   190    0  390     0  623    0     0 1439    0
Reduct Vol:    0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:   0    0    0   190    0  390     0  623    0     0 1439    0
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 0.00  1.00 1.00 0.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 0.00  1.00 1.00 0.00
FinalVolume:   0    0    0   190    0  390     0  623    0     0 1439    0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900
Adjustment:  1.00 1.00 1.00  0.92 1.00 0.75  1.00 0.91 1.00  1.00 0.95 0.88
Lanes:       0.00 0.00 0.00  2.00 0.00 2.00  0.00 3.00 1.00  0.00 2.00 2.00
Final Sat.:     0    0    0  3502    0 2842     0 5187 1900     0 3610 3344
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00 0.00  0.05 0.00 0.14  0.00 0.12 0.00  0.00 0.40 0.00
Crit Moves:                            ****  ****                  ****
Green/Cycle: 0.00 0.00 0.00  0.24 0.00 0.24  0.00 0.68 0.00  0.00 0.68 0.00
Volume/Cap:  0.00 0.00 0.00  0.23 0.00 0.58  0.00 0.18 0.00  0.00 0.58 0.00
Delay/Veh:    0.0  0.0  0.0  31.0  0.0 35.2   0.0  5.7  0.0   0.0  8.6  0.0
User DelAdj: 1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
AdjDel/Veh:   0.0  0.0  0.0  31.0  0.0 35.2   0.0  5.7  0.0   0.0  8.6  0.0
LOS by Move:    A    A    A     C    A    D     A    A    A     A    A    A
HCM2k95thQ:     0    0    0     5    0   13     0    5    0     0   20    0
********************************************************************************

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AM 2024 plus Project OptionTue Mar 5, 2013 11:30:37                 Page 4-1
--------------------------------------------------------------------------------
           AM Peak Hour - 2024 plus Project East of Artesian Slough
                    South San Francisco Bay Shoreline Study
                               City of San Jose
--------------------------------------------------------------------------------

                       Level Of Service Computation Report
            2000 HCM Operations Method (Future Volume Alternative)
********************************************************************************
Intersection #3 I-880 NB Ramp-California Cir/Dixon landing Rd
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):        1.081
Loss Time (sec):      16                Average Delay (sec/veh):       53.8
Optimal Cycle:       180                Level Of Service:                 D
********************************************************************************
Street Name:         Dixon Landing Rd            I-880 NB Ramp-California Cir
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Split Phase      Split Phase       Protected        Protected
Rights:            Ovl            Include          Include          Include
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
Y+R:         4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
Lanes:       1  1  0  0  2    1  0  0  1  1    0  0  3  0  1    1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    347   68   762    16    0   236     0  760   253    61 2400   602
Growth Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 347   68   762    16    0   236     0  760   253    61 2400   602
Added Vol:     0    0     0     0    0    13     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut: 347   68   762    16    0   249     0  760   253    61 2400   602
User Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:  347   68   762    16    0   249     0  760   253    61 2400   602
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 347   68   762    16    0   249     0  760   253    61 2400   602
PCE Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume: 347   68   762    16    0   249     0  760   253    61 2400   602
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment: 0.96 0.96  0.75  0.95 1.00  0.85  1.00 0.91  0.85  0.95 0.88  0.88
Lanes:      1.67 0.33  2.00  1.00 0.00  2.00  0.00 3.00  1.00  1.00 2.40  0.60
Final Sat.: 3050  598  2842  1805    0  3230     0 5187  1615  1805 4022  1009
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.11 0.11  0.27  0.01 0.00  0.08  0.00 0.15  0.16  0.03 0.60  0.60
Crit Moves:            ****              ****  ****                   ****
Green/Cycle: 0.22 0.22  0.31  0.07 0.00  0.07  0.00 0.45  0.45  0.10 0.55  0.55
Volume/Cap:  0.52 0.52  0.85  0.12 0.00  1.08  0.00 0.32  0.35  0.35 1.08  1.08
Delay/Veh:   35.3 35.3  40.0  43.9  0.0 128.9   0.0 17.5  18.0  43.3 66.1  66.1
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  35.3 35.3  40.0  43.9  0.0 128.9   0.0 17.5  18.0  43.3 66.1  66.1
LOS by Move:    D    D     D     D    A     F     A    B     B     D    E     E
HCM2k95thQ:    12   12    27     1    0    15     0   10    10     4   75    75
********************************************************************************

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PM 2024 plus Project E of AFri Mar 1, 2013 13:46:46            Page 2-1
-------------------------------------------------------------------------------
           PM Peak Hour - 2024 plus Project East of Artesian Slough
                    South San Francisco Bay Shoreline Study
                               City of San Jose
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
             2000 HCM Operations Method (Future Volume Alternative)
*******************************************************************************
Intersection #4 237/ZANKER (N)
*******************************************************************************
Cycle (sec):          71               Critical Vol./Cap.(X):         0.313
Loss Time (sec):       9               Average Delay (sec/veh):        14.5
Optimal Cycle:        36               Level Of Service:                  B
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:           Ignore          Include          Include          Include
Min. Green:     0   10    10    7   10     0    0    0     0   10    0    10
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         0  0  2  0  1   1  0  1  0  0   0  0  0  0  0   2  0  0  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  229   736   59  197     0    0    0     0  553    0   150
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:    0  229   736   59  197     0    0    0     0  553    0   150
Added Vol:      0    0     0    7   13     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    0  229   736   66  210     0    0    0     0  553    0   150
User Adj:    1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:     0  229     0   66  210     0    0    0     0  553    0   150
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:    0  229     0   66  210     0    0    0     0  553    0   150
PCE Adj:     1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:    0  229     0   66  210     0    0    0     0  553    0   150
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment:  0.92 1.00  0.92 0.92 1.00  0.92 0.92 1.00  0.92 0.83 1.00  0.92
Lanes:       0.00 2.00  1.00 1.00 1.00  0.00 0.00 0.00  0.00 2.00 0.00  1.00
Final Sat.:     0 3800  1750 1750 1900     0    0    0     0 3150    0  1750
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.06  0.00 0.04 0.11  0.00 0.00 0.00  0.00 0.18 0.00  0.09
Crit Moves:       ****      ****                                ****
Green Time:   0.0 13.7   0.0  8.5 22.2   0.0  0.0  0.0   0.0 39.8  0.0  39.8
Volume/Cap:  0.00 0.31  0.00 0.31 0.35  0.00 0.00 0.00  0.00 0.31 0.00  0.15
Delay/Veh:    0.0 24.9   0.0 29.4 19.2   0.0  0.0  0.0   0.0  8.4  0.0   7.6
User DelAdj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:   0.0 24.9   0.0 29.4 19.2   0.0  0.0  0.0   0.0  8.4  0.0   7.6
LOS by Move:    A    C     A    C   B-     A    A    A     A    A    A     A
HCM2kAvgQ:      0    2     0    2    4     0    0    0     0    4    0     2
*******************************************************************************
Note: Queue reported is the number of cars per lane.

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PM 2024 plus Project E of AFri Mar 1, 2013 13:46:46            Page 3-1
-------------------------------------------------------------------------------
           PM Peak Hour - 2024 plus Project East of Artesian Slough
                    South San Francisco Bay Shoreline Study
                               City of San Jose
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
             2000 HCM Operations Method (Future Volume Alternative)
*******************************************************************************
Intersection #5 237/ZANKER (S)
*******************************************************************************
Cycle (sec):          76               Critical Vol./Cap.(X):         0.489
Loss Time (sec):       9               Average Delay (sec/veh):        18.7
Optimal Cycle:        36               Level Of Service:                 B-
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Protected        Protected       Split Phase      Split Phase
Rights:           Ignore          Include          Include          Include
Min. Green:     0   10    10    7   10     0   10   10    10    0    0     0
Y+R:          4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0  4.0  4.0   4.0
Lanes:         0  0  3  0  1   1  0  2  0  0   0  1  0  0  2   0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  777   774  185  614     0   97    2   572    0    0     0
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:    0  777   774  185  614     0   97    2   572    0    0     0
Added Vol:      0    0     0   13    0     0    0    0     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    0  777   774  198  614     0   97    2   572    0    0     0
User Adj:    1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:     0  777     0  198  614     0   97    2   572    0    0     0
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:    0  777     0  198  614     0   97    2   572    0    0     0
PCE Adj:     1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:    0  777     0  198  614     0   97    2   572    0    0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900 1900 1900  1900 1900 1900  1900 1900 1900  1900
Adjustment:  0.92 1.00  0.92 0.92 1.00  0.92 0.92 1.00  0.83 0.92 1.00  0.92
Lanes:       0.00 3.00  1.00 1.00 2.00  0.00 0.98 0.02  2.00 0.00 0.00  0.00
Final Sat.:     0 5700  1750 1750 3800     0 1717   35  3150    0    0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.14  0.00 0.11 0.16  0.00 0.06 0.06  0.18 0.00 0.00  0.00
Crit Moves:       ****      ****                          ****
Green Time:   0.0 21.2   0.0 17.6 38.8   0.0 28.2 28.2  28.2  0.0  0.0   0.0
Volume/Cap:  0.00 0.49  0.00 0.49 0.32  0.00 0.15 0.15  0.49 0.00 0.00  0.00
Delay/Veh:    0.0 23.1   0.0 26.2 11.0   0.0 16.0 16.0  18.7  0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
AdjDel/Veh:   0.0 23.1   0.0 26.2 11.0   0.0 16.0 16.0  18.7  0.0  0.0   0.0
LOS by Move:    A    C     A    C   B+     A    B    B    B-    A    A     A
HCM2kAvgQ:      0    5     0    4    4     0    2    2     7    0    0     0
*******************************************************************************
Note: Queue reported is the number of cars per lane.

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Appendix A5

Criteria Pollutants

Shoreline - Alt2 - NED

San Francisco Bay Area Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	1.00	User Defined Unit	3,000.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project will allow approximately 3,000 acres of former salt pond to be restored

Construction Phase - Estimated construction dates

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using assumed equipment from original AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

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Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Trips and VMT - # workers = pieces of equipment x 1.25
4 miles RT assumed for hauling

Demolition - No Demo

Grading - Section 1 = 4380', Section 2=2120', Section 3=2975', Section 4=5525', Section 5=4775' x 108' width + 30' TCE on each side. Degrade=45' width. Ecotone=50' width (1/10 material as LPP)

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	15,500.00	65.00
tblConstructionPhase	NumDays	15,500.00	88.00
tblConstructionPhase	NumDays	15,500.00	86.00
tblConstructionPhase	NumDays	15,500.00	151.00
tblConstructionPhase	NumDays	15,500.00	140.00
tblConstructionPhase	NumDays	15,500.00	88.00

tblConstructionPhase	NumDays	15,500.00	97.00
tblConstructionPhase	NumDays	15,500.00	99.00
tblConstructionPhase	NumDays	15,500.00	32.00
tblConstructionPhase	NumDays	15,500.00	152.00
tblConstructionPhase	NumDays	15,500.00	109.00
tblConstructionPhase	NumDays	15,500.00	43.00
tblConstructionPhase	NumDays	15,500.00	151.00
tblConstructionPhase	NumDays	11,000.00	11.00
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	11,000.00	21.00
tblConstructionPhase	NumDays	11,000.00	16.00
tblConstructionPhase	NumDays	6,000.00	22.00
tblConstructionPhase	NumDays	6,000.00	23.00
tblConstructionPhase	NumDays	6,000.00	21.00
tblConstructionPhase	NumDays	6,000.00	12.00
tblConstructionPhase	NumDays	6,000.00	21.00
tblGrading	AcresOfGrading	455.00	4.52
tblGrading	AcresOfGrading	616.00	5.71
tblGrading	AcresOfGrading	602.00	4.93
tblGrading	AcresOfGrading	830.50	17.50
tblGrading	AcresOfGrading	770.00	15.13
tblGrading	AcresOfGrading	44.00	5.03
tblGrading	AcresOfGrading	48.50	6.34
tblGrading	AcresOfGrading	49.50	5.48
tblGrading	AcresOfGrading	224.00	2.19
tblGrading	AcresOfGrading	836.00	13.88
tblGrading	AcresOfGrading	599.50	6.72

tblGrading	AcresOfGrading	301.00	3.07
tblGrading	AcresOfGrading	830.50	9.42
tblGrading	AcresOfGrading	88.00	0.00
tblGrading	AcresOfGrading	92.00	0.00
tblGrading	AcresOfGrading	84.00	0.00
tblGrading	AcresOfGrading	48.00	0.00
tblGrading	AcresOfGrading	84.00	0.00
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tblGrading	MaterialExported	0.00	59,191.00
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tblGrading	MaterialImported	0.00	148,220.00
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tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00

tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	2.1637	24.0580	15.7866	0.0275	1.3715	0.9514	2.3229	0.7220	0.8753	1.5973			2,537.2541			2,552.7656
2018	2.4962	26.8881	18.3834	0.0360	2.8632	1.0548	3.9181	1.5247	0.9704	2.4952			3,259.6235			3,279.8470
2019	2.3015	23.7574	17.6432	0.0358	1.5726	0.9163	2.4889	0.8208	0.8430	1.6638			3,194.2750			3,214.2601
2020	2.1876	21.5419	17.5613	0.0364	1.3734	0.8247	2.1981	0.7117	0.7587	1.4704			3,167.0816			3,187.0999
2021	1.5842	14.6885	12.6573	0.0281	2.4971	0.5798	3.0768	1.3252	0.5334	1.8586			2,449.7311			2,465.3373
2022	0.6594	5.3665	5.6136	0.0122	1.2358	0.2217	1.4575	0.6620	0.2040	0.8660			1,062.8273			1,069.4528
Total	**11.3926**	**116.3002**	**87.6455**	**0.1760**	**10.9136**	**4.5487**	**15.4623**	**5.7664**	**4.1848**	**9.9512**			**15,670.7926**			**15,768.7627**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	2.1637	24.0580	15.7866	0.0275	0.6588	0.9514	1.6102	0.3360	0.8753	1.2113			2,537.2512			2,552.7627
2018	2.4962	26.8880	18.3834	0.0360	1.3495	1.0548	2.4043	0.7024	0.9704	1.6728			3,259.6199			3,279.8433
2019	2.3015	23.7573	17.6432	0.0358	0.7660	0.9163	1.6824	0.3850	0.8430	1.2280			3,194.2714			3,214.2565
2020	2.1876	21.5419	17.5613	0.0364	0.6763	0.8247	1.5010	0.3360	0.7587	1.0947			3,167.0781			3,187.0964
2021	1.5842	14.6885	12.6573	0.0281	1.1785	0.5798	1.7583	0.6109	0.5334	1.1443			2,449.7284			2,465.3345
2022	0.6594	5.3664	5.6136	0.0122	0.5793	0.2217	0.8011	0.3042	0.2040	0.5082			1,062.8262			1,069.4517
Total	**11.3925**	**116.3001**	**87.6454**	**0.1760**	**5.2084**	**4.5487**	**9.7571**	**2.6745**	**4.1848**	**6.8593**			**15,670.7752**			**15,768.7452**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**52.28**	**0.00**	**36.90**	**53.62**	**0.00**	**31.07**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000			2.0000e-005			2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Waste						0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Water						0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**2.0000e-005**			**2.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000			2.0000e-005			2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Waste						0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Water						0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**2.0000e-005**			**2.0000e-005**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Section 1 - Degrade	Grading	4/1/2017	6/30/2017	5	65	
2	Section 1 - Stripping	Site Preparation	7/1/2017	7/31/2017	5	21	
3	Section 2 - Degrade	Grading	8/1/2017	9/13/2017	5	32	
4	Section 1 - Placement	Grading	9/14/2017	4/13/2018	5	152	
5	Section 2 - Stripping	Site Preparation	4/14/2018	5/1/2018	5	12	
6	Section 2 - Placement	Grading	5/2/2018	10/1/2018	5	109	
7	Section 3 - Degrade	Grading	10/2/2018	11/29/2018	5	43	
8	Section 3 - Stripping	Site Preparation	11/30/2018	12/28/2018	5	21	
9	Section 3 - Placement	Grading	12/29/2018	7/29/2019	5	151	
10	Section 2 - Roadway	Paving	7/30/2019	8/13/2019	5	11	
11	Section 1 - Roadway	Paving	8/14/2019	8/27/2019	5	10	
12	Section 4 - Degrade	Grading	8/28/2019	12/27/2019	5	88	
13	Section 5 - Degrade	Grading	12/28/2019	4/27/2020	5	86	
14	Section 3 - Roadway	Paving	4/28/2020	5/11/2020	5	10	
15	Section 4 - Stripping	Site Preparation	5/12/2020	6/10/2020	5	22	
16	Section 4 - Placement	Grading	6/11/2020	1/7/2021	5	151	
17	Section 5 - Stripping	Site Preparation	1/8/2021	2/9/2021	5	23	
18	Section 5 - Placement	Grading	2/10/2021	8/24/2021	5	140	
19	Pond A12 Ecotone	Grading	8/25/2021	12/24/2021	5	88	
20	Section 4 - Roadway	Paving	12/25/2021	1/24/2022	5	21	
21	Section 5 - Roadway	Paving	1/25/2022	2/15/2022	5	16	
22	Pond A18 Ecotone Phase 1	Grading	2/16/2022	6/30/2022	5	97	
23	Pond A18 Ecotone Phase 2	Grading	7/1/2022	11/16/2022	5	99	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Section 1 - Degrade	Excavators	2	8.00	162	0.38
Section 1 - Degrade	Graders	0	8.00	174	0.41
Section 1 - Degrade	Off-Highway Trucks	12	8.00	400	0.38
Section 1 - Degrade	Rubber Tired Dozers	1	8.00	255	0.40
Section 1 - Degrade	Scrapers	7	8.00	361	0.48
Section 1 - Degrade	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 1 - Stripping	Excavators	1	8.00	162	0.38
Section 1 - Stripping	Off-Highway Trucks	6	8.00	400	0.38
Section 1 - Stripping	Rubber Tired Dozers	1	8.00	255	0.40
Section 1 - Stripping	Scrapers	4	8.00	361	0.48
Section 1 - Stripping	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 2 - Degrade	Excavators	2	8.00	162	0.38
Section 2 - Degrade	Graders	0	8.00	174	0.41
Section 2 - Degrade	Off-Highway Trucks	12	8.00	400	0.38
Section 2 - Degrade	Rubber Tired Dozers	1	8.00	255	0.40
Section 2 - Degrade	Scrapers	7	8.00	361	0.48
Section 2 - Degrade	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 1 - Placement	Excavators	2	8.00	162	0.38
Section 1 - Placement	Graders	1	8.00	174	0.41
Section 1 - Placement	Off-Highway Trucks	12	8.00	400	0.38
Section 1 - Placement	Rollers	1	8.00	80	0.38
Section 1 - Placement	Rubber Tired Dozers	2	8.00	255	0.40
Section 1 - Placement	Scrapers	5	8.00	361	0.48

Section 1 - Placement	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Section 2 - Stripping	Excavators	1	8.00	162	0.38
Section 2 - Stripping	Off-Highway Trucks	6	8.00	400	0.38
Section 2 - Stripping	Rubber Tired Dozers	1	8.00	255	0.40
Section 2 - Stripping	Scrapers	4	8.00	361	0.48
Section 2 - Stripping	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 2 - Placement	Excavators	2	8.00	162	0.38
Section 2 - Placement	Graders	1	8.00	174	0.41
Section 2 - Placement	Off-Highway Trucks	12	8.00	400	0.38
Section 2 - Placement	Rollers	1	8.00	80	0.38
Section 2 - Placement	Rubber Tired Dozers	2	8.00	255	0.40
Section 2 - Placement	Scrapers	5	8.00	361	0.48
Section 2 - Placement	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 3 - Degrade	Excavators	2	8.00	162	0.38
Section 3 - Degrade	Graders	0	8.00	174	0.41
Section 3 - Degrade	Off-Highway Trucks	12	8.00	400	0.38
Section 3 - Degrade	Rubber Tired Dozers	1	8.00	255	0.40
Section 3 - Degrade	Scrapers	7	8.00	361	0.48
Section 3 - Degrade	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 3 - Stripping	Excavators	1	8.00	162	0.38
Section 3 - Stripping	Off-Highway Trucks	6	8.00	400	0.38
Section 3 - Stripping	Rubber Tired Dozers	1	8.00	255	0.40
Section 3 - Stripping	Scrapers	4	8.00	361	0.48
Section 3 - Stripping	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 3 - Placement	Excavators	2	8.00	162	0.38
Section 3 - Placement	Graders	1	8.00	174	0.41
Section 3 - Placement	Off-Highway Trucks	12	8.00	400	0.38
Section 3 - Placement	Rollers	1	8.00	80	0.38

Section 3 - Placement	Rubber Tired Dozers		2	8.00	255	0.40
Section 3 - Placement	Scrapers		5	8.00	361	0.48
Section 3 - Placement	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 2 - Roadway	Graders		1	8.00	174	0.41
Section 2 - Roadway	Off-Highway Trucks		2	8.00	400	0.38
Section 2 - Roadway	Pavers		0	8.00	125	0.42
Section 2 - Roadway	Paving Equipment		0	8.00	130	0.36
Section 2 - Roadway	Rollers		1	8.00	80	0.38
Section 2 - Roadway	Rubber Tired Dozers		1	8.00	255	0.40
Section 1 - Roadway	Graders		1	8.00	174	0.41
Section 1 - Roadway	Off-Highway Trucks		2	8.00	400	0.38
Section 1 - Roadway	Pavers		0	8.00	125	0.42
Section 1 - Roadway	Paving Equipment		0	8.00	130	0.36
Section 1 - Roadway	Rollers		1	8.00	80	0.38
Section 1 - Roadway	Rubber Tired Dozers		1	8.00	255	0.40
Section 4 - Degrade	Excavators		2	8.00	162	0.38
Section 4 - Degrade	Graders		0	8.00	174	0.41
Section 4 - Degrade	Off-Highway Trucks		12	8.00	400	0.38
Section 4 - Degrade	Rubber Tired Dozers		1	8.00	255	0.40
Section 4 - Degrade	Scrapers		7	8.00	361	0.48
Section 4 - Degrade	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 5 - Degrade	Excavators		2	8.00	162	0.38
Section 5 - Degrade	Graders		0	8.00	174	0.41
Section 5 - Degrade	Off-Highway Trucks		12	8.00	400	0.38
Section 5 - Degrade	Rubber Tired Dozers		1	8.00	255	0.40
Section 5 - Degrade	Scrapers		7	8.00	361	0.48
Section 5 - Degrade	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 3 - Roadway	Graders		1	8.00	174	0.41

Section 3 - Roadway	Off-Highway Trucks		2	8.00	400	0.38
Section 3 - Roadway	Pavers		0	8.00	125	0.42
Section 3 - Roadway	Paving Equipment		0	8.00	130	0.36
Section 3 - Roadway	Rollers		1	8.00	80	0.38
Section 3 - Roadway	Rubber Tired Dozers		1	8.00	255	0.40
Section 4 - Stripping	Excavators		1	8.00	162	0.38
Section 4 - Stripping	Off-Highway Trucks		6	8.00	400	0.38
Section 4 - Stripping	Rubber Tired Dozers		1	8.00	255	0.40
Section 4 - Stripping	Scrapers		4	8.00	361	0.48
Section 4 - Stripping	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 4 - Placement	Excavators		2	8.00	162	0.38
Section 4 - Placement	Graders		1	8.00	174	0.41
Section 4 - Placement	Off-Highway Trucks		12	8.00	400	0.38
Section 4 - Placement	Rollers		1	8.00	80	0.38
Section 4 - Placement	Rubber Tired Dozers		2	8.00	255	0.40
Section 4 - Placement	Scrapers		5	8.00	361	0.48
Section 4 - Placement	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 5 - Stripping	Excavators		1	8.00	162	0.38
Section 5 - Stripping	Off-Highway Trucks		6	8.00	400	0.38
Section 5 - Stripping	Rubber Tired Dozers		1	8.00	255	0.40
Section 5 - Stripping	Scrapers		4	8.00	361	0.48
Section 5 - Stripping	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 5 - Placement	Excavators		2	8.00	162	0.38
Section 5 - Placement	Graders		1	8.00	174	0.41
Section 5 - Placement	Off-Highway Trucks		12	8.00	400	0.38
Section 5 - Placement	Rollers		1	8.00	80	0.38
Section 5 - Placement	Rubber Tired Dozers		2	8.00	255	0.40
Section 5 - Placement	Scrapers		5	8.00	361	0.48

Section 5 - Placement	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Pond A12 Ecotone	Excavators	0	8.00	162	0.38
Pond A12 Ecotone	Graders	1	8.00	174	0.41
Pond A12 Ecotone	Off-Highway Trucks	6	8.00	400	0.38
Pond A12 Ecotone	Rollers	1	8.00	80	0.38
Pond A12 Ecotone	Rubber Tired Dozers	2	8.00	255	0.40
Pond A12 Ecotone	Scrapers	0	8.00	361	0.48
Pond A12 Ecotone	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 4 - Roadway	Graders	1	8.00	174	0.41
Section 4 - Roadway	Off-Highway Trucks	2	8.00	400	0.38
Section 4 - Roadway	Pavers	0	8.00	125	0.42
Section 4 - Roadway	Paving Equipment	0	8.00	130	0.36
Section 4 - Roadway	Rollers	1	8.00	80	0.38
Section 4 - Roadway	Rubber Tired Dozers	1	8.00	255	0.40
Section 5 - Roadway	Graders	1	8.00	174	0.41
Section 5 - Roadway	Off-Highway Trucks	2	8.00	400	0.38
Section 5 - Roadway	Pavers	0	8.00	125	0.42
Section 5 - Roadway	Paving Equipment	0	8.00	130	0.36
Section 5 - Roadway	Rollers	1	8.00	80	0.38
Section 5 - Roadway	Rubber Tired Dozers	1	8.00	255	0.40
Pond A18 Ecotone Phase 1	Excavators	0	8.00	162	0.38
Pond A18 Ecotone Phase 1	Graders	1	8.00	174	0.41
Pond A18 Ecotone Phase 1	Off-Highway Trucks	6	8.00	400	0.38
Pond A18 Ecotone Phase 1	Rollers	1	8.00	80	0.38
Pond A18 Ecotone Phase 1	Rubber Tired Dozers	2	8.00	255	0.40
Pond A18 Ecotone Phase 1	Scrapers	0	8.00	361	0.48
Pond A18 Ecotone Phase 1	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Pond A18 Ecotone Phase 2	Excavators	0	8.00	162	0.38

Pond A18 Ecotone Phase 2	Graders		1	8.00	174	0.41
Pond A18 Ecotone Phase 2	Off-Highway Trucks		6	8.00	400	0.38
Pond A18 Ecotone Phase 2	Rollers		1	8.00	80	0.38
Pond A18 Ecotone Phase 2	Rubber Tired Dozers		2	8.00	255	0.40
Pond A18 Ecotone Phase 2	Scrapers		0	8.00	361	0.48
Pond A18 Ecotone Phase 2	Tractors/Loaders/Backhoes		0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Section 1 - Degrade	22	55.00	0.00	6,446.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 1 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 2 - Degrade	22	55.00	0.00	4,917.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 1 - Placement	25	63.00	8.00	20,118.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 2 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 2 - Placement	23	58.00	8.00	9,792.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 3 - Degrade	22	55.00	0.00	7,399.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 3 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 3 - Placement	23	58.00	8.00	17,492.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 2 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Section 1 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Section 4 - Degrade	22	55.00	0.00	16,896.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 5 - Degrade	22	55.00	0.00	15,460.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 3 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Section 4 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 4 - Placement	23	58.00	8.00	31,019.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 5 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 5 - Placement	23	58.00	8.00	18,528.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Pond A12 Ecotone	10	25.00	8.00	7,584.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 4 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Section 5 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond A18 Ecotone Phase 1	10	25.00	8.00	11,428.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Pond A18 Ecotone Phase 2	10	25.00	8.00	3,921.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Section 1 - Degrade - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2010	0.0000	0.2010	0.1083	0.0000	0.1083			0.0000			0.0000
Off-Road	0.6979	8.2377	4.6928	9.1500e-003		0.3241	0.3241		0.2982	0.2982			848.7461			854.2072
Total	**0.6979**	**8.2377**	**4.6928**	**9.1500e-003**	**0.2010**	**0.3241**	**0.5252**	**0.1083**	**0.2982**	**0.4065**			**848.7461**			**854.2072**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0386	0.1489	0.6032	3.0000e-004	5.4900e-003	1.2600e-003	6.7500e-003	1.5100e-003	1.1500e-003	2.6700e-003			26.2934			26.2997
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	6.0100e-003	8.7900e-003	0.0846	1.9000e-004	0.0162	1.3000e-004	0.0163	4.3100e-003	1.2000e-004	4.4300e-003			14.1542			14.1698
Total	**0.0447**	**0.1577**	**0.6878**	**4.9000e-004**	**0.0217**	**1.3900e-003**	**0.0231**	**5.8200e-003**	**1.2700e-003**	**7.1000e-003**			**40.4476**			**40.4695**

3.2 Section 1 - Degrade - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0905	0.0000	0.0905	0.0487	0.0000	0.0487			0.0000			0.0000
Off-Road	0.6979	8.2377	4.6928	9.1500e-003		0.3241	0.3241		0.2982	0.2982			848.7451			854.2062
Total	**0.6979**	**8.2377**	**4.6928**	**9.1500e-003**	**0.0905**	**0.3241**	**0.4146**	**0.0487**	**0.2982**	**0.3469**			**848.7451**			**854.2062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0386	0.1489	0.6032	3.0000e-004	5.4900e-003	1.2600e-003	6.7500e-003	1.5100e-003	1.1500e-003	2.6700e-003			26.2934			26.2997
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	6.0100e-003	8.7900e-003	0.0846	1.9000e-004	0.0162	1.3000e-004	0.0163	4.3100e-003	1.2000e-004	4.4300e-003			14.1542			14.1698
Total	**0.0447**	**0.1577**	**0.6878**	**4.9000e-004**	**0.0217**	**1.3900e-003**	**0.0231**	**5.8200e-003**	**1.2700e-003**	**7.1000e-003**			**40.4476**			**40.4695**

3.3 Section 1 - Stripping - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0632	0.0000	0.0632	0.0348	0.0000	0.0348			0.0000			0.0000
Off-Road	0.1258	1.4856	0.8638	1.6000e-003		0.0590	0.0590		0.0543	0.0543			148.6946			149.6513
Total	**0.1258**	**1.4856**	**0.8638**	**1.6000e-003**	**0.0632**	**0.0590**	**0.1222**	**0.0348**	**0.0543**	**0.0891**			**148.6946**			**149.6513**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	1.0600e-003	1.5500e-003	0.0149	3.0000e-005	2.8600e-003	2.0000e-005	2.8800e-003	7.6000e-004	2.0000e-005	7.8000e-004			2.4943			2.4971
Total	**1.0600e-003**	**1.5500e-003**	**0.0149**	**3.0000e-005**	**2.8600e-003**	**2.0000e-005**	**2.8800e-003**	**7.6000e-004**	**2.0000e-005**	**7.8000e-004**			**2.4943**			**2.4971**

3.3 Section 1 - Stripping - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0285	0.0000	0.0285	0.0156	0.0000	0.0156			0.0000			0.0000
Off-Road	0.1258	1.4856	0.8638	1.6000e-003		0.0590	0.0590		0.0543	0.0543			148.6944			149.6511
Total	**0.1258**	**1.4856**	**0.8638**	**1.6000e-003**	**0.0285**	**0.0590**	**0.0875**	**0.0156**	**0.0543**	**0.0699**			**148.6944**			**149.6511**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	1.0600e-003	1.5500e-003	0.0149	3.0000e-005	2.8600e-003	2.0000e-005	2.8800e-003	7.6000e-004	2.0000e-005	7.8000e-004			2.4943			2.4971
Total	**1.0600e-003**	**1.5500e-003**	**0.0149**	**3.0000e-005**	**2.8600e-003**	**2.0000e-005**	**2.8800e-003**	**7.6000e-004**	**2.0000e-005**	**7.8000e-004**			**2.4943**			**2.4971**

3.4 Section 2 - Degrade - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0997	0.0000	0.0997	0.0534	0.0000	0.0534			0.0000			0.0000
Off-Road	0.3436	4.0555	2.3103	4.5000e-003		0.1596	0.1596		0.1468	0.1468			417.8442			420.5328
Total	**0.3436**	**4.0555**	**2.3103**	**4.5000e-003**	**0.0997**	**0.1596**	**0.2593**	**0.0534**	**0.1468**	**0.2002**			**417.8442**			**420.5328**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0295	0.1136	0.4601	2.3000e-004	4.1900e-003	9.6000e-004	5.1500e-003	1.1500e-003	8.8000e-004	2.0400e-003			20.0565			20.0614
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	2.9600e-003	4.3300e-003	0.0417	9.0000e-005	7.9800e-003	6.0000e-005	8.0500e-003	2.1200e-003	6.0000e-005	2.1800e-003			6.9682			6.9759
Total	**0.0324**	**0.1179**	**0.5018**	**3.2000e-004**	**0.0122**	**1.0200e-003**	**0.0132**	**3.2700e-003**	**9.4000e-004**	**4.2200e-003**			**27.0248**			**27.0373**

3.4 Section 2 - Degrade - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0449	0.0000	0.0449	0.0240	0.0000	0.0240			0.0000			0.0000
Off-Road	0.3436	4.0555	2.3103	4.5000e-003		0.1596	0.1596		0.1468	0.1468			417.8437			420.5323
Total	**0.3436**	**4.0555**	**2.3103**	**4.5000e-003**	**0.0449**	**0.1596**	**0.2044**	**0.0240**	**0.1468**	**0.1708**			**417.8437**			**420.5323**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0295	0.1136	0.4601	2.3000e-004	4.1900e-003	9.6000e-004	5.1500e-003	1.1500e-003	8.8000e-004	2.0400e-003			20.0565			20.0614
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	2.9600e-003	4.3300e-003	0.0417	9.0000e-005	7.9800e-003	6.0000e-005	8.0500e-003	2.1200e-003	6.0000e-005	2.1800e-003			6.9682			6.9759
Total	**0.0324**	**0.1179**	**0.5018**	**3.2000e-004**	**0.0122**	**1.0200e-003**	**0.0132**	**3.2700e-003**	**9.4000e-004**	**4.2200e-003**			**27.0248**			**27.0373**

3.5 Section 1 - Placement - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9318	0.0000	0.9318	0.5053	0.0000	0.5053			0.0000			0.0000
Off-Road	0.8455	9.7271	5.6039	0.0106		0.4037	0.4037		0.3714	0.3714			984.6772			991.0130
Total	**0.8455**	**9.7271**	**5.6039**	**0.0106**	**0.9318**	**0.4037**	**1.3355**	**0.5053**	**0.3714**	**0.8767**			**984.6772**			**991.0130**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0611	0.2354	0.9536	4.8000e-004	0.0150	1.9900e-003	0.0170	3.9300e-003	1.8300e-003	5.7600e-003			41.5707			41.5808
Vendor	3.5500e-003	0.0277	0.0428	7.0000e-005	1.9800e-003	4.0000e-004	2.3800e-003	5.7000e-004	3.7000e-004	9.3000e-004			6.5484			6.5494
Worker	8.1600e-003	0.0119	0.1148	2.6000e-004	0.0220	1.8000e-004	0.0222	5.8500e-003	1.6000e-004	6.0100e-003			19.2062			19.2273
Total	**0.0728**	**0.2750**	**1.1113**	**8.1000e-004**	**0.0389**	**2.5700e-003**	**0.0415**	**0.0104**	**2.3600e-003**	**0.0127**			**67.3253**			**67.3575**

3.5 Section 1 - Placement - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4193	0.0000	0.4193	0.2274	0.0000	0.2274			0.0000			0.0000
Off-Road	0.8455	9.7271	5.6039	0.0106		0.4037	0.4037		0.3714	0.3714			984.6761			991.0118
Total	**0.8455**	**9.7271**	**5.6039**	**0.0106**	**0.4193**	**0.4037**	**0.8230**	**0.2274**	**0.3714**	**0.5988**			**984.6761**			**991.0118**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0611	0.2354	0.9536	4.8000e-004	0.0150	1.9900e-003	0.0170	3.9300e-003	1.8300e-003	5.7600e-003			41.5707			41.5808
Vendor	3.5500e-003	0.0277	0.0428	7.0000e-005	1.9800e-003	4.0000e-004	2.3800e-003	5.7000e-004	3.7000e-004	9.3000e-004			6.5484			6.5494
Worker	8.1600e-003	0.0119	0.1148	2.6000e-004	0.0220	1.8000e-004	0.0222	5.8500e-003	1.6000e-004	6.0100e-003			19.2062			19.2273
Total	**0.0728**	**0.2750**	**1.1113**	**8.1000e-004**	**0.0389**	**2.5700e-003**	**0.0415**	**0.0104**	**2.3600e-003**	**0.0127**			**67.3253**			**67.3575**

3.5 Section 1 - Placement - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9318	0.0000	0.9318	0.5053	0.0000	0.5053			0.0000			0.0000
Off-Road	0.7216	8.0627	4.8489	0.0103		0.3292	0.3292		0.3029	0.3029			943.9901			950.1615
Total	**0.7216**	**8.0627**	**4.8489**	**0.0103**	**0.9318**	**0.3292**	**1.2610**	**0.5053**	**0.3029**	**0.8082**			**943.9901**			**950.1615**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0506	0.2130	0.8653	4.6000e-004	0.0149	1.9000e-003	0.0168	3.9100e-003	1.7400e-003	5.6600e-003			39.7436			39.7536
Vendor	3.0700e-003	0.0244	0.0388	7.0000e-005	1.9300e-003	3.6000e-004	2.2900e-003	5.5000e-004	3.3000e-004	8.8000e-004			6.2662			6.2672
Worker	7.0900e-003	0.0105	0.1000	2.5000e-004	0.0214	1.6000e-004	0.0216	5.7000e-003	1.5000e-004	5.8500e-003			18.0134			18.0323
Total	**0.0608**	**0.2478**	**1.0041**	**7.8000e-004**	**0.0383**	**2.4200e-003**	**0.0407**	**0.0102**	**2.2200e-003**	**0.0124**			**64.0232**			**64.0531**

3.5 Section 1 - Placement - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4193	0.0000	0.4193	0.2274	0.0000	0.2274			0.0000			0.0000
Off-Road	0.7216	8.0627	4.8489	0.0103		0.3292	0.3292		0.3029	0.3029			943.9889			950.1603
Total	**0.7216**	**8.0627**	**4.8489**	**0.0103**	**0.4193**	**0.3292**	**0.7485**	**0.2274**	**0.3029**	**0.5303**			**943.9889**			**950.1603**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0506	0.2130	0.8653	4.6000e-004	0.0149	1.9000e-003	0.0168	3.9100e-003	1.7400e-003	5.6600e-003			39.7436			39.7536
Vendor	3.0700e-003	0.0244	0.0388	7.0000e-005	1.9300e-003	3.6000e-004	2.2900e-003	5.5000e-004	3.3000e-004	8.8000e-004			6.2662			6.2672
Worker	7.0900e-003	0.0105	0.1000	2.5000e-004	0.0214	1.6000e-004	0.0216	5.7000e-003	1.5000e-004	5.8500e-003			18.0134			18.0323
Total	**0.0608**	**0.2478**	**1.0041**	**7.8000e-004**	**0.0383**	**2.4200e-003**	**0.0407**	**0.0102**	**2.2200e-003**	**0.0124**			**64.0232**			**64.0531**

3.6 Section 2 - Stripping - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0361	0.0000	0.0361	0.0199	0.0000	0.0199			0.0000			0.0000
Off-Road	0.0630	0.7225	0.4319	9.2000e-004		0.0283	0.0283		0.0260	0.0260			83.6413			84.1881
Total	**0.0630**	**0.7225**	**0.4319**	**9.2000e-004**	**0.0361**	**0.0283**	**0.0644**	**0.0199**	**0.0260**	**0.0459**			**83.6413**			**84.1881**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	5.4000e-004	8.0000e-004	7.6200e-003	2.0000e-005	1.6300e-003	1.0000e-005	1.6500e-003	4.3000e-004	1.0000e-005	4.5000e-004			1.3725			1.3739
Total	**5.4000e-004**	**8.0000e-004**	**7.6200e-003**	**2.0000e-005**	**1.6300e-003**	**1.0000e-005**	**1.6500e-003**	**4.3000e-004**	**1.0000e-005**	**4.5000e-004**			**1.3725**			**1.3739**

3.6 Section 2 - Stripping - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0163	0.0000	0.0163	8.9400e-003	0.0000	8.9400e-003			0.0000			0.0000
Off-Road	0.0630	0.7225	0.4319	9.2000e-004		0.0283	0.0283		0.0260	0.0260			83.6412			84.1880
Total	**0.0630**	**0.7225**	**0.4319**	**9.2000e-004**	**0.0163**	**0.0283**	**0.0445**	**8.9400e-003**	**0.0260**	**0.0349**			**83.6412**			**84.1880**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	5.4000e-004	8.0000e-004	7.6200e-003	2.0000e-005	1.6300e-003	1.0000e-005	1.6500e-003	4.3000e-004	1.0000e-005	4.5000e-004			1.3725			1.3739
Total	**5.4000e-004**	**8.0000e-004**	**7.6200e-003**	**2.0000e-005**	**1.6300e-003**	**1.0000e-005**	**1.6500e-003**	**4.3000e-004**	**1.0000e-005**	**4.5000e-004**			**1.3725**			**1.3739**

3.7 Section 2 - Placement - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6644	0.0000	0.6644	0.3619	0.0000	0.3619			0.0000			0.0000
Off-Road	1.0197	11.4312	6.7923	0.0147		0.4581	0.4581		0.4215	0.4215			1,341.0039			1,349.7709
Total	**1.0197**	**11.4312**	**6.7923**	**0.0147**	**0.6644**	**0.4581**	**1.1225**	**0.3619**	**0.4215**	**0.7833**			**1,341.0039**			**1,349.7709**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0499	0.2101	0.8535	4.5000e-004	8.3400e-003	1.8700e-003	0.0102	2.3000e-003	1.7200e-003	4.0200e-003			39.2046			39.2144
Vendor	4.4600e-003	0.0355	0.0564	1.0000e-004	2.8100e-003	5.2000e-004	3.3300e-003	8.0000e-004	4.8000e-004	1.2800e-003			9.1069			9.1084
Worker	9.4900e-003	0.0140	0.1338	3.4000e-004	0.0287	2.2000e-004	0.0289	7.6300e-003	2.0000e-004	7.8300e-003			24.1017			24.1270
Total	**0.0639**	**0.2596**	**1.0438**	**8.9000e-004**	**0.0398**	**2.6100e-003**	**0.0424**	**0.0107**	**2.4000e-003**	**0.0131**			**72.4131**			**72.4497**

3.7 Section 2 - Placement - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2990	0.0000	0.2990	0.1628	0.0000	0.1628			0.0000			0.0000
Off-Road	1.0197	11.4312	6.7923	0.0147		0.4581	0.4581		0.4215	0.4215			1,341.0023			1,349.7693
Total	**1.0197**	**11.4312**	**6.7923**	**0.0147**	**0.2990**	**0.4581**	**0.7571**	**0.1628**	**0.4215**	**0.5843**			**1,341.0023**			**1,349.7693**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0499	0.2101	0.8535	4.5000e-004	8.3400e-003	1.8700e-003	0.0102	2.3000e-003	1.7200e-003	4.0200e-003			39.2046			39.2144
Vendor	4.4600e-003	0.0355	0.0564	1.0000e-004	2.8100e-003	5.2000e-004	3.3300e-003	8.0000e-004	4.8000e-004	1.2800e-003			9.1069			9.1084
Worker	9.4900e-003	0.0140	0.1338	3.4000e-004	0.0287	2.2000e-004	0.0289	7.6300e-003	2.0000e-004	7.8300e-003			24.1017			24.1270
Total	**0.0639**	**0.2596**	**1.0438**	**8.9000e-004**	**0.0398**	**2.6100e-003**	**0.0424**	**0.0107**	**2.4000e-003**	**0.0131**			**72.4131**			**72.4497**

3.8 Section 3 - Degrade - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1345	0.0000	0.1345	0.0719	0.0000	0.0719			0.0000			0.0000
Off-Road	0.4042	4.6261	2.7165	6.0500e-003		0.1790	0.1790		0.1647	0.1647			552.6944			556.3077
Total	**0.4042**	**4.6261**	**2.7165**	**6.0500e-003**	**0.1345**	**0.1790**	**0.3135**	**0.0719**	**0.1647**	**0.2366**			**552.6944**			**556.3077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0377	0.1587	0.6450	3.4000e-004	6.3000e-003	1.4200e-003	7.7200e-003	1.7400e-003	1.3000e-003	3.0400e-003			29.6236			29.6310
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	3.5500e-003	5.2400e-003	0.0501	1.3000e-004	0.0107	8.0000e-005	0.0108	2.8500e-003	8.0000e-005	2.9300e-003			9.0162			9.0257
Total	**0.0413**	**0.1640**	**0.6950**	**4.7000e-004**	**0.0170**	**1.5000e-003**	**0.0185**	**4.5900e-003**	**1.3800e-003**	**5.9700e-003**			**38.6398**			**38.6567**

3.8 Section 3 - Degrade - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0605	0.0000	0.0605	0.0323	0.0000	0.0323			0.0000			0.0000
Off-Road	0.4042	4.6260	2.7165	6.0500e-003		0.1790	0.1790		0.1647	0.1647			552.6938			556.3071
Total	**0.4042**	**4.6260**	**2.7165**	**6.0500e-003**	**0.0605**	**0.1790**	**0.2395**	**0.0323**	**0.1647**	**0.1970**			**552.6938**			**556.3071**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0377	0.1587	0.6450	3.4000e-004	6.3000e-003	1.4200e-003	7.7200e-003	1.7400e-003	1.3000e-003	3.0400e-003			29.6236			29.6310
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	3.5500e-003	5.2400e-003	0.0501	1.3000e-004	0.0107	8.0000e-005	0.0108	2.8500e-003	8.0000e-005	2.9300e-003			9.0162			9.0257
Total	**0.0413**	**0.1640**	**0.6950**	**4.7000e-004**	**0.0170**	**1.5000e-003**	**0.0185**	**4.5900e-003**	**1.3800e-003**	**5.9700e-003**			**38.6398**			**38.6567**

3.9 Section 3 - Stripping - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0632	0.0000	0.0632	0.0348	0.0000	0.0348			0.0000			0.0000
Off-Road	0.1103	1.2643	0.7558	1.6000e-003		0.0494	0.0494		0.0455	0.0455			146.3722			147.3291
Total	**0.1103**	**1.2643**	**0.7558**	**1.6000e-003**	**0.0632**	**0.0494**	**0.1127**	**0.0348**	**0.0455**	**0.0803**			**146.3722**			**147.3291**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	9.5000e-004	1.3900e-003	0.0133	3.0000e-005	2.8600e-003	2.0000e-005	2.8800e-003	7.6000e-004	2.0000e-005	7.8000e-004			2.4018			2.4043
Total	**9.5000e-004**	**1.3900e-003**	**0.0133**	**3.0000e-005**	**2.8600e-003**	**2.0000e-005**	**2.8800e-003**	**7.6000e-004**	**2.0000e-005**	**7.8000e-004**			**2.4018**			**2.4043**

3.9 Section 3 - Stripping - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0285	0.0000	0.0285	0.0156	0.0000	0.0156			0.0000			0.0000
Off-Road	0.1103	1.2643	0.7558	1.6000e-003		0.0494	0.0494		0.0455	0.0455			146.3720			147.3289
Total	**0.1103**	**1.2643**	**0.7558**	**1.6000e-003**	**0.0285**	**0.0494**	**0.0779**	**0.0156**	**0.0455**	**0.0611**			**146.3720**			**147.3289**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	9.5000e-004	1.3900e-003	0.0133	3.0000e-005	2.8600e-003	2.0000e-005	2.8800e-003	7.6000e-004	2.0000e-005	7.8000e-004			2.4018			2.4043
Total	**9.5000e-004**	**1.3900e-003**	**0.0133**	**3.0000e-005**	**2.8600e-003**	**2.0000e-005**	**2.8800e-003**	**7.6000e-004**	**2.0000e-005**	**7.8000e-004**			**2.4018**			**2.4043**

3.10 Section 3 - Placement - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9222	0.0000	0.9222	0.5016	0.0000	0.5016			0.0000			0.0000
Off-Road	9.3500e-003	0.1049	0.0623	1.3000e-004		4.2000e-003	4.2000e-003		3.8700e-003	3.8700e-003			12.3028			12.3832
Total	**9.3500e-003**	**0.1049**	**0.0623**	**1.3000e-004**	**0.9222**	**4.2000e-003**	**0.9264**	**0.5016**	**3.8700e-003**	**0.5055**			**12.3028**			**12.3832**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.9000e-004	2.4900e-003	0.0101	1.0000e-005	0.0111	2.0000e-005	0.0111	2.7200e-003	2.0000e-005	2.7400e-003			0.4638			0.4639
Vendor	4.0000e-005	3.3000e-004	5.2000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005			0.0836			0.0836
Worker	9.0000e-005	1.3000e-004	1.2300e-003	0.0000	2.6000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005			0.2211			0.2214
Total	**7.2000e-004**	**2.9500e-003**	**0.0119**	**1.0000e-005**	**0.0114**	**2.0000e-005**	**0.0114**	**2.8000e-003**	**2.0000e-005**	**2.8200e-003**			**0.7685**			**0.7688**

3.10 Section 3 - Placement - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4150	0.0000	0.4150	0.2257	0.0000	0.2257			0.0000			0.0000
Off-Road	9.3500e-003	0.1049	0.0623	1.3000e-004		4.2000e-003	4.2000e-003		3.8700e-003	3.8700e-003			12.3028			12.3832
Total	**9.3500e-003**	**0.1049**	**0.0623**	**1.3000e-004**	**0.4150**	**4.2000e-003**	**0.4192**	**0.2257**	**3.8700e-003**	**0.2296**			**12.3028**			**12.3832**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.9000e-004	2.4900e-003	0.0101	1.0000e-005	0.0111	2.0000e-005	0.0111	2.7200e-003	2.0000e-005	2.7400e-003			0.4638			0.4639
Vendor	4.0000e-005	3.3000e-004	5.2000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005			0.0836			0.0836
Worker	9.0000e-005	1.3000e-004	1.2300e-003	0.0000	2.6000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005			0.2211			0.2214
Total	**7.2000e-004**	**2.9500e-003**	**0.0119**	**1.0000e-005**	**0.0114**	**2.0000e-005**	**0.0114**	**2.8000e-003**	**2.0000e-005**	**2.8200e-003**			**0.7685**			**0.7688**

3.10 Section 3 - Placement - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9222	0.0000	0.9222	0.5016	0.0000	0.5016			0.0000			0.0000
Off-Road	1.2976	14.0077	8.8226	0.0202		0.5598	0.5598		0.5150	0.5150			1,815.1872			1,827.2476
Total	**1.2976**	**14.0077**	**8.8226**	**0.0202**	**0.9222**	**0.5598**	**1.4820**	**0.5016**	**0.5150**	**1.0166**			**1,815.1872**			**1,827.2476**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0809	0.3505	1.4587	8.0000e-004	0.0149	3.2700e-003	0.0181	4.1000e-003	3.0000e-003	7.1000e-003			68.3581			68.3757
Vendor	5.6800e-003	0.0446	0.0740	1.4000e-004	3.8600e-003	6.7000e-004	4.5300e-003	1.1100e-003	6.1000e-004	1.7200e-003			12.3168			12.3188
Worker	0.0119	0.0176	0.1672	4.7000e-004	0.0395	3.0000e-004	0.0398	0.0105	2.8000e-004	0.0108			31.9750			32.0074
Total	**0.0985**	**0.4126**	**1.6998**	**1.4100e-003**	**0.0582**	**4.2400e-003**	**0.0624**	**0.0157**	**3.8900e-003**	**0.0196**			**112.6499**			**112.7019**

3.10 Section 3 - Placement - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4150	0.0000	0.4150	0.2257	0.0000	0.2257			0.0000			0.0000
Off-Road	1.2976	14.0077	8.8226	0.0202		0.5598	0.5598		0.5150	0.5150			1,815.185 1			1,827.245 5
Total	**1.2976**	**14.0077**	**8.8226**	**0.0202**	**0.4150**	**0.5598**	**0.9748**	**0.2257**	**0.5150**	**0.7407**			**1,815.185 1**			**1,827.245 5**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0809	0.3505	1.4587	8.0000e-004	0.0149	3.2700e-003	0.0181	4.1000e-003	3.0000e-003	7.1000e-003			68.3581			68.3757
Vendor	5.6800e-003	0.0446	0.0740	1.4000e-004	3.8600e-003	6.7000e-004	4.5300e-003	1.1100e-003	6.1000e-004	1.7200e-003			12.3168			12.3188
Worker	0.0119	0.0176	0.1672	4.7000e-004	0.0395	3.0000e-004	0.0398	0.0105	2.8000e-004	0.0108			31.9750			32.0074
Total	**0.0985**	**0.4126**	**1.6998**	**1.4100e-003**	**0.0582**	**4.2400e-003**	**0.0624**	**0.0157**	**3.8900e-003**	**0.0196**			**112.6499**			**112.7019**

3.11 Section 2 - Roadway - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0189	0.1934	0.1265	2.4000e-004		8.8000e-003	8.8000e-003		8.0900e-003	8.0900e-003			21.7525			21.8970
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0189**	**0.1934**	**0.1265**	**2.4000e-004**		**8.8000e-003**	**8.8000e-003**		**8.0900e-003**	**8.0900e-003**			**21.7525**			**21.8970**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	2.0000e-004	2.9000e-004	2.7500e-003	1.0000e-005	6.5000e-004	0.0000	6.5000e-004	1.7000e-004	0.0000	1.8000e-004			0.5256			0.5261
Total	**2.0000e-004**	**2.9000e-004**	**2.7500e-003**	**1.0000e-005**	**6.5000e-004**	**0.0000**	**6.5000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**			**0.5256**			**0.5261**

3.11 Section 2 - Roadway - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0189	0.1934	0.1265	2.4000e-004		8.8000e-003	8.8000e-003		8.0900e-003	8.0900e-003			21.7525			21.8970
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0189**	**0.1934**	**0.1265**	**2.4000e-004**		**8.8000e-003**	**8.8000e-003**		**8.0900e-003**	**8.0900e-003**			**21.7525**			**21.8970**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	2.0000e-004	2.9000e-004	2.7500e-003	1.0000e-005	6.5000e-004	0.0000	6.5000e-004	1.7000e-004	0.0000	1.8000e-004			0.5256			0.5261
Total	**2.0000e-004**	**2.9000e-004**	**2.7500e-003**	**1.0000e-005**	**6.5000e-004**	**0.0000**	**6.5000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**			**0.5256**			**0.5261**

3.12 Section 1 - Roadway - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0172	0.1758	0.1150	2.2000e-004		8.0000e-003	8.0000e-003		7.3600e-003	7.3600e-003			19.7750			19.9064
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0172**	**0.1758**	**0.1150**	**2.2000e-004**		**8.0000e-003**	**8.0000e-003**		**7.3600e-003**	**7.3600e-003**			**19.7750**			**19.9064**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	1.8000e-004	2.6000e-004	2.5000e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004			0.4778			0.4783
Total	**1.8000e-004**	**2.6000e-004**	**2.5000e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**			**0.4778**			**0.4783**

3.12 Section 1 - Roadway - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0172	0.1758	0.1150	2.2000e-004		8.0000e-003	8.0000e-003		7.3600e-003	7.3600e-003			19.7750			19.9064
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0172**	**0.1758**	**0.1150**	**2.2000e-004**		**8.0000e-003**	**8.0000e-003**		**7.3600e-003**	**7.3600e-003**			**19.7750**			**19.9064**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	1.8000e-004	2.6000e-004	2.5000e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004			0.4778			0.4783
Total	**1.8000e-004**	**2.6000e-004**	**2.5000e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**			**0.4778**			**0.4783**

3.13 Section 4 - Degrade - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2756	0.0000	0.2756	0.1471	0.0000	0.1471			0.0000			0.0000
Off-Road	0.7645	8.4179	5.2120	0.0124		0.3247	0.3247		0.2987	0.2987			1,112.5456			1,119.9375
Total	**0.7645**	**8.4179**	**5.2120**	**0.0124**	**0.2756**	**0.3247**	**0.6004**	**0.1471**	**0.2987**	**0.4459**			**1,112.5456**			**1,119.9375**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0787	0.3408	1.4183	7.8000e-004	0.0144	3.1800e-003	0.0176	3.9700e-003	2.9200e-003	6.8900e-003			66.4691			66.4862
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	6.6100e-003	9.7600e-003	0.0930	2.6000e-004	0.0220	1.7000e-004	0.0221	5.8400e-003	1.5000e-004	5.9900e-003			17.7884			17.8064
Total	**0.0853**	**0.3506**	**1.5113**	**1.0400e-003**	**0.0363**	**3.3500e-003**	**0.0397**	**9.8100e-003**	**3.0700e-003**	**0.0129**			**84.2575**			**84.2927**

3.13 Section 4 - Degrade - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1240	0.0000	0.1240	0.0662	0.0000	0.0662			0.0000			0.0000
Off-Road	0.7645	8.4179	5.2120	0.0124		0.3247	0.3247		0.2987	0.2987			1,112.544 3			1,119.936 2
Total	**0.7645**	**8.4179**	**5.2120**	**0.0124**	**0.1240**	**0.3247**	**0.4488**	**0.0662**	**0.2987**	**0.3649**			**1,112.544 3**			**1,119.936 2**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0787	0.3408	1.4183	7.8000e-004	0.0144	3.1800e-003	0.0176	3.9700e-003	2.9200e-003	6.8900e-003			66.4691			66.4862
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	6.6100e-003	9.7600e-003	0.0930	2.6000e-004	0.0220	1.7000e-004	0.0221	5.8400e-003	1.5000e-004	5.9900e-003			17.7884			17.8064
Total	**0.0853**	**0.3506**	**1.5113**	**1.0400e-003**	**0.0363**	**3.3500e-003**	**0.0397**	**9.8100e-003**	**3.0700e-003**	**0.0129**			**84.2575**			**84.2927**

3.14 Section 5 - Degrade - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2686	0.0000	0.2686	0.1437	0.0000	0.1437			0.0000			0.0000
Off-Road	0.0174	0.1913	0.1185	2.8000e-004		7.3800e-003	7.3800e-003		6.7900e-003	6.7900e-003			25.2851			25.4531
Total	**0.0174**	**0.1913**	**0.1185**	**2.8000e-004**	**0.2686**	**7.3800e-003**	**0.2759**	**0.1437**	**6.7900e-003**	**0.1505**			**25.2851**			**25.4531**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6700e-003	7.2500e-003	0.0302	2.0000e-005	9.8500e-003	7.0000e-005	9.9200e-003	2.4300e-003	6.0000e-005	2.4900e-003			1.4144			1.4148
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	1.5000e-004	2.2000e-004	2.1100e-003	1.0000e-005	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004			0.4043			0.4047
Total	**1.8200e-003**	**7.4700e-003**	**0.0323**	**3.0000e-005**	**0.0104**	**7.0000e-005**	**0.0104**	**2.5600e-003**	**6.0000e-005**	**2.6300e-003**			**1.8187**			**1.8195**

3.14 Section 5 - Degrade - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1209	0.0000	0.1209	0.0647	0.0000	0.0647			0.0000			0.0000
Off-Road	0.0174	0.1913	0.1185	2.8000e-004		7.3800e-003	7.3800e-003		6.7900e-003	6.7900e-003			25.2851			25.4531
Total	**0.0174**	**0.1913**	**0.1185**	**2.8000e-004**	**0.1209**	**7.3800e-003**	**0.1282**	**0.0647**	**6.7900e-003**	**0.0715**			**25.2851**			**25.4531**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6700e-003	7.2500e-003	0.0302	2.0000e-005	9.8500e-003	7.0000e-005	9.9200e-003	2.4300e-003	6.0000e-005	2.4900e-003			1.4144			1.4148
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	1.5000e-004	2.2000e-004	2.1100e-003	1.0000e-005	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.4000e-004			0.4043			0.4047
Total	**1.8200e-003**	**7.4700e-003**	**0.0323**	**3.0000e-005**	**0.0104**	**7.0000e-005**	**0.0104**	**2.5600e-003**	**6.0000e-005**	**2.6300e-003**			**1.8187**			**1.8195**

3.14 Section 5 - Degrade - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2686	0.0000	0.2686	0.1437	0.0000	0.1437			0.0000			0.0000
Off-Road	0.6812	7.2034	4.6825	0.0118		0.2777	0.2777		0.2555	0.2555			1,038.5387			1,045.5923
Total	**0.6812**	**7.2034**	**4.6825**	**0.0118**	**0.2686**	**0.2777**	**0.5463**	**0.1437**	**0.2555**	**0.3992**			**1,038.5387**			**1,045.5923**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0633	0.2749	1.2190	7.0000e-004	0.0131	2.7800e-003	0.0159	3.6000e-003	2.5600e-003	6.1600e-003			58.0232			58.0388
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	5.8700e-003	8.5800e-003	0.0818	2.5000e-004	0.0210	1.6000e-004	0.0211	5.5700e-003	1.4000e-004	5.7200e-003			16.2974			16.3135
Total	**0.0691**	**0.2835**	**1.3008**	**9.5000e-004**	**0.0340**	**2.9400e-003**	**0.0370**	**9.1700e-003**	**2.7000e-003**	**0.0119**			**74.3205**			**74.3523**

3.14 Section 5 - Degrade - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1209	0.0000	0.1209	0.0647	0.0000	0.0647			0.0000			0.0000
Off-Road	0.6812	7.2034	4.6825	0.0118		0.2777	0.2777		0.2555	0.2555			1,038.5375			1,045.5910
Total	**0.6812**	**7.2034**	**4.6825**	**0.0118**	**0.1209**	**0.2777**	**0.3986**	**0.0647**	**0.2555**	**0.3202**			**1,038.5375**			**1,045.5910**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0633	0.2749	1.2190	7.0000e-004	0.0131	2.7800e-003	0.0159	3.6000e-003	2.5600e-003	6.1600e-003			58.0232			58.0388
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	5.8700e-003	8.5800e-003	0.0818	2.5000e-004	0.0210	1.6000e-004	0.0211	5.5700e-003	1.4000e-004	5.7200e-003			16.2974			16.3135
Total	**0.0691**	**0.2835**	**1.3008**	**9.5000e-004**	**0.0340**	**2.9400e-003**	**0.0370**	**9.1700e-003**	**2.7000e-003**	**0.0119**			**74.3205**			**74.3523**

3.15 Section 3 - Roadway - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0160	0.1589	0.1098	2.2000e-004		7.2300e-003	7.2300e-003		6.6500e-003	6.6500e-003			19.3373			19.4686
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0160**	**0.1589**	**0.1098**	**2.2000e-004**		**7.2300e-003**	**7.2300e-003**		**6.6500e-003**	**6.6500e-003**			**19.3373**			**19.4686**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	1.7000e-004	2.4000e-004	2.3000e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004			0.4586			0.4590
Total	**1.7000e-004**	**2.4000e-004**	**2.3000e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**			**0.4586**			**0.4590**

3.15 Section 3 - Roadway - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0160	0.1589	0.1098	2.2000e-004		7.2300e-003	7.2300e-003		6.6500e-003	6.6500e-003			19.3373			19.4686
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0160**	**0.1589**	**0.1098**	**2.2000e-004**		**7.2300e-003**	**7.2300e-003**		**6.6500e-003**	**6.6500e-003**			**19.3373**			**19.4686**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	1.7000e-004	2.4000e-004	2.3000e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004			0.4586			0.4590
Total	**1.7000e-004**	**2.4000e-004**	**2.3000e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**			**0.4586**			**0.4590**

3.16 Section 4 - Stripping - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0662	0.0000	0.0662	0.0364	0.0000	0.0364			0.0000			0.0000
Off-Road	0.0999	1.0627	0.6972	1.6800e-003		0.0414	0.0414		0.0381	0.0381			147.5054			148.5073
Total	**0.0999**	**1.0627**	**0.6972**	**1.6800e-003**	**0.0662**	**0.0414**	**0.1077**	**0.0364**	**0.0381**	**0.0745**			**147.5054**			**148.5073**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	8.4000e-004	1.2300e-003	0.0117	4.0000e-005	2.9900e-003	2.0000e-005	3.0200e-003	8.0000e-004	2.0000e-005	8.2000e-004			2.3282			2.3305
Total	**8.4000e-004**	**1.2300e-003**	**0.0117**	**4.0000e-005**	**2.9900e-003**	**2.0000e-005**	**3.0200e-003**	**8.0000e-004**	**2.0000e-005**	**8.2000e-004**			**2.3282**			**2.3305**

3.16 Section 4 - Stripping - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0298	0.0000	0.0298	0.0164	0.0000	0.0164			0.0000			0.0000
Off-Road	0.0999	1.0627	0.6972	1.6800e-003		0.0414	0.0414		0.0381	0.0381			147.5053			148.5071
Total	**0.0999**	**1.0627**	**0.6972**	**1.6800e-003**	**0.0298**	**0.0414**	**0.0712**	**0.0164**	**0.0381**	**0.0545**			**147.5053**			**148.5071**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	8.4000e-004	1.2300e-003	0.0117	4.0000e-005	2.9900e-003	2.0000e-005	3.0200e-003	8.0000e-004	2.0000e-005	8.2000e-004			2.3282			2.3305
Total	**8.4000e-004**	**1.2300e-003**	**0.0117**	**4.0000e-005**	**2.9900e-003**	**2.0000e-005**	**3.0200e-003**	**8.0000e-004**	**2.0000e-005**	**8.2000e-004**			**2.3282**			**2.3305**

3.17 Section 4 - Placement - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9327	0.0000	0.9327	0.5030	0.0000	0.5030			0.0000			0.0000
Off-Road	1.1789	12.2332	8.1176	0.0197		0.4889	0.4889		0.4498	0.4498			1,727.7657			1,739.5004
Total	**1.1789**	**12.2332**	**8.1176**	**0.0197**	**0.9327**	**0.4889**	**1.4216**	**0.5030**	**0.4498**	**0.9528**			**1,727.7657**			**1,739.5004**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1256	0.5460	2.4211	1.3900e-003	0.0262	5.5200e-003	0.0317	7.2000e-003	5.0800e-003	0.0123			115.2431			115.2740
Vendor	5.0500e-003	0.0370	0.0686	1.4000e-004	3.7600e-003	5.8000e-004	4.3400e-003	1.0800e-003	5.3000e-004	1.6100e-003			11.7127			11.7146
Worker	0.0108	0.0157	0.1499	4.6000e-004	0.0384	2.9000e-004	0.0387	0.0102	2.6000e-004	0.0105			29.8714			29.9011
Total	**0.1414**	**0.5988**	**2.6396**	**1.9900e-003**	**0.0684**	**6.3900e-003**	**0.0748**	**0.0185**	**5.8700e-003**	**0.0244**			**156.8272**			**156.8896**

3.17 Section 4 - Placement - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4197	0.0000	0.4197	0.2263	0.0000	0.2263			0.0000			0.0000
Off-Road	1.1789	12.2332	8.1175	0.0197		0.4889	0.4889		0.4498	0.4498			1,727.7636			1,739.4983
Total	**1.1789**	**12.2332**	**8.1175**	**0.0197**	**0.4197**	**0.4889**	**0.9086**	**0.2263**	**0.4498**	**0.6762**			**1,727.7636**			**1,739.4983**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1256	0.5460	2.4211	1.3900e-003	0.0262	5.5200e-003	0.0317	7.2000e-003	5.0800e-003	0.0123			115.2431			115.2740
Vendor	5.0500e-003	0.0370	0.0686	1.4000e-004	3.7600e-003	5.8000e-004	4.3400e-003	1.0800e-003	5.3000e-004	1.6100e-003			11.7127			11.7146
Worker	0.0108	0.0157	0.1499	4.6000e-004	0.0384	2.9000e-004	0.0387	0.0102	2.6000e-004	0.0105			29.8714			29.9011
Total	**0.1414**	**0.5988**	**2.6396**	**1.9900e-003**	**0.0684**	**6.3900e-003**	**0.0748**	**0.0185**	**5.8700e-003**	**0.0244**			**156.8272**			**156.8896**

3.17 Section 4 - Placement - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9327	0.0000	0.9327	0.5030	0.0000	0.5030			0.0000			0.0000
Off-Road	0.0372	0.3655	0.2627	6.7000e-004		0.0147	0.0147		0.0135	0.0135			59.1729			59.5748
Total	**0.0372**	**0.3655**	**0.2627**	**6.7000e-004**	**0.9327**	**0.0147**	**0.9473**	**0.5030**	**0.0135**	**0.5165**			**59.1729**			**59.5748**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0700e-003	0.0165	0.0810	5.0000e-005	0.0198	1.9000e-004	0.0200	4.8900e-003	1.7000e-004	5.0700e-003			3.9407			3.9418
Vendor	1.6000e-004	1.0400e-003	2.2700e-003	0.0000	1.3000e-004	2.0000e-005	1.5000e-004	4.0000e-005	2.0000e-005	5.0000e-005			0.4006			0.4007
Worker	3.5000e-004	5.0000e-004	4.7900e-003	2.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004			1.0050			1.0060
Total	**4.5800e-003**	**0.0181**	**0.0880**	**7.0000e-005**	**0.0213**	**2.2000e-004**	**0.0215**	**5.2800e-003**	**2.0000e-004**	**5.4800e-003**			**5.3464**			**5.3485**

3.17 Section 4 - Placement - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4197	0.0000	0.4197	0.2263	0.0000	0.2263			0.0000			0.0000
Off-Road	0.0372	0.3655	0.2627	6.7000e-004		0.0147	0.0147		0.0135	0.0135			59.1728			59.5747
Total	**0.0372**	**0.3655**	**0.2627**	**6.7000e-004**	**0.4197**	**0.0147**	**0.4343**	**0.2263**	**0.0135**	**0.2398**			**59.1728**			**59.5747**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0700e-003	0.0165	0.0810	5.0000e-005	0.0198	1.9000e-004	0.0200	4.8900e-003	1.7000e-004	5.0700e-003			3.9407			3.9418
Vendor	1.6000e-004	1.0400e-003	2.2700e-003	0.0000	1.3000e-004	2.0000e-005	1.5000e-004	4.0000e-005	2.0000e-005	5.0000e-005			0.4006			0.4007
Worker	3.5000e-004	5.0000e-004	4.7900e-003	2.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004			1.0050			1.0060
Total	**4.5800e-003**	**0.0181**	**0.0880**	**7.0000e-005**	**0.0213**	**2.2000e-004**	**0.0215**	**5.2800e-003**	**2.0000e-004**	**5.4800e-003**			**5.3464**			**5.3485**

3.18 Section 5 - Stripping - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0693	0.0000	0.0693	0.0381	0.0000	0.0381			0.0000			0.0000
Off-Road	0.0965	0.9762	0.6866	1.7600e-003		0.0381	0.0381		0.0351	0.0351			154.2272			155.2747
Total	**0.0965**	**0.9762**	**0.6866**	**1.7600e-003**	**0.0693**	**0.0381**	**0.1074**	**0.0381**	**0.0351**	**0.0732**			**154.2272**			**155.2747**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	8.3000e-004	1.1900e-003	0.0114	4.0000e-005	3.1300e-003	2.0000e-005	3.1500e-003	8.3000e-004	2.0000e-005	8.5000e-004			2.3912			2.3935
Total	**8.3000e-004**	**1.1900e-003**	**0.0114**	**4.0000e-005**	**3.1300e-003**	**2.0000e-005**	**3.1500e-003**	**8.3000e-004**	**2.0000e-005**	**8.5000e-004**			**2.3912**			**2.3935**

3.18 Section 5 - Stripping - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0312	0.0000	0.0312	0.0171	0.0000	0.0171			0.0000			0.0000
Off-Road	0.0965	0.9762	0.6866	1.7600e-003		0.0381	0.0381		0.0351	0.0351			154.2270			155.2745
Total	**0.0965**	**0.9762**	**0.6866**	**1.7600e-003**	**0.0312**	**0.0381**	**0.0693**	**0.0171**	**0.0351**	**0.0522**			**154.2270**			**155.2745**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	8.3000e-004	1.1900e-003	0.0114	4.0000e-005	3.1300e-003	2.0000e-005	3.1500e-003	8.3000e-004	2.0000e-005	8.5000e-004			2.3912			2.3935
Total	**8.3000e-004**	**1.1900e-003**	**0.0114**	**4.0000e-005**	**3.1300e-003**	**2.0000e-005**	**3.1500e-003**	**8.3000e-004**	**2.0000e-005**	**8.5000e-004**			**2.3912**			**2.3935**

3.19 Section 5 - Placement - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.8595	0.0000	0.8595	0.4656	0.0000	0.4656			0.0000			0.0000
Off-Road	1.0411	10.2337	7.3567	0.0189		0.4102	0.4102		0.3774	0.3774			1,656.8406			1,668.0936
Total	**1.0411**	**10.2337**	**7.3567**	**0.0189**	**0.8595**	**0.4102**	**1.2697**	**0.4656**	**0.3774**	**0.8429**			**1,656.8406**			**1,668.0936**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0733	0.2979	1.4605	8.5000e-004	0.0158	3.3500e-003	0.0191	4.3500e-003	3.0800e-003	7.4300e-003			71.0858			71.1055
Vendor	4.6100e-003	0.0292	0.0636	1.3000e-004	3.6000e-003	5.0000e-004	4.1100e-003	1.0300e-003	4.6000e-004	1.5000e-003			11.2177			11.2195
Worker	9.7300e-003	0.0140	0.1342	4.4000e-004	0.0368	2.7000e-004	0.0371	9.8000e-003	2.5000e-004	0.0101			28.1404			28.1674
Total	**0.0877**	**0.3411**	**1.6583**	**1.4200e-003**	**0.0562**	**4.1200e-003**	**0.0603**	**0.0152**	**3.7900e-003**	**0.0190**			**110.4439**			**110.4923**

3.19 Section 5 - Placement - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3868	0.0000	0.3868	0.2095	0.0000	0.2095			0.0000			0.0000
Off-Road	1.0411	10.2337	7.3567	0.0189		0.4102	0.4102		0.3774	0.3774			1,656.8386			1,668.0916
Total	**1.0411**	**10.2337**	**7.3567**	**0.0189**	**0.3868**	**0.4102**	**0.7969**	**0.2095**	**0.3774**	**0.5869**			**1,656.8386**			**1,668.0916**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0733	0.2979	1.4605	8.5000e-004	0.0158	3.3500e-003	0.0191	4.3500e-003	3.0800e-003	7.4300e-003			71.0858			71.1055
Vendor	4.6100e-003	0.0292	0.0636	1.3000e-004	3.6000e-003	5.0000e-004	4.1100e-003	1.0300e-003	4.6000e-004	1.5000e-003			11.2177			11.2195
Worker	9.7300e-003	0.0140	0.1342	4.4000e-004	0.0368	2.7000e-004	0.0371	9.8000e-003	2.5000e-004	0.0101			28.1404			28.1674
Total	**0.0877**	**0.3411**	**1.6583**	**1.4200e-003**	**0.0562**	**4.1200e-003**	**0.0603**	**0.0152**	**3.7900e-003**	**0.0190**			**110.4439**			**110.4923**

3.20 Pond A12 Ecotone - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5360	0.0000	0.5360	0.2921	0.0000	0.2921			0.0000			0.0000
Off-Road	0.2734	2.5396	1.8663	4.6400e-003		0.1076	0.1076		0.0990	0.0990			407.6445			410.4131
Total	**0.2734**	**2.5396**	**1.8663**	**4.6400e-003**	**0.5360**	**0.1076**	**0.6436**	**0.2921**	**0.0990**	**0.3911**			**407.6445**			**410.4131**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0300	0.1219	0.5978	3.5000e-004	6.4600e-003	1.3700e-003	7.8300e-003	1.7800e-003	1.2600e-003	3.0400e-003			29.0973			29.1053
Vendor	2.9000e-003	0.0183	0.0400	8.0000e-005	2.2700e-003	3.2000e-004	2.5800e-003	6.5000e-004	2.9000e-004	9.4000e-004			7.0511			7.0523
Worker	2.6400e-003	3.8000e-003	0.0364	1.2000e-004	9.9800e-003	7.0000e-005	0.0101	2.6500e-003	7.0000e-005	2.7200e-003			7.6242			7.6316
Total	**0.0356**	**0.1441**	**0.6742**	**5.5000e-004**	**0.0187**	**1.7600e-003**	**0.0205**	**5.0800e-003**	**1.6200e-003**	**6.7000e-003**			**43.7727**			**43.7892**

3.20 Pond A12 Ecotone - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2412	0.0000	0.2412	0.1315	0.0000	0.1315			0.0000			0.0000
Off-Road	0.2734	2.5396	1.8663	4.6400e-003		0.1076	0.1076		0.0990	0.0990			407.6440			410.4126
Total	**0.2734**	**2.5396**	**1.8663**	**4.6400e-003**	**0.2412**	**0.1076**	**0.3488**	**0.1315**	**0.0990**	**0.2304**			**407.6440**			**410.4126**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0300	0.1219	0.5978	3.5000e-004	6.4600e-003	1.3700e-003	7.8300e-003	1.7800e-003	1.2600e-003	3.0400e-003			29.0973			29.1053
Vendor	2.9000e-003	0.0183	0.0400	8.0000e-005	2.2700e-003	3.2000e-004	2.5800e-003	6.5000e-004	2.9000e-004	9.4000e-004			7.0511			7.0523
Worker	2.6400e-003	3.8000e-003	0.0364	1.2000e-004	9.9800e-003	7.0000e-005	0.0101	2.6500e-003	7.0000e-005	2.7200e-003			7.6242			7.6316
Total	**0.0356**	**0.1441**	**0.6742**	**5.5000e-004**	**0.0187**	**1.7600e-003**	**0.0205**	**5.0800e-003**	**1.6200e-003**	**6.7000e-003**			**43.7727**			**43.7892**

3.21 Section 4 - Roadway - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.2900e-003	0.0691	0.0520	1.1000e-004		3.1500e-003	3.1500e-003		2.9000e-003	2.9000e-003			9.6665			9.7321
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**7.2900e-003**	**0.0691**	**0.0520**	**1.1000e-004**		**3.1500e-003**	**3.1500e-003**		**2.9000e-003**	**2.9000e-003**			**9.6665**			**9.7321**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	8.0000e-005	1.1000e-004	1.0700e-003	0.0000	2.9000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005			0.2253			0.2255
Total	**8.0000e-005**	**1.1000e-004**	**1.0700e-003**	**0.0000**	**2.9000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**			**0.2253**			**0.2255**

3.21 Section 4 - Roadway - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.2900e-003	0.0691	0.0520	1.1000e-004		3.1500e-003	3.1500e-003		2.9000e-003	2.9000e-003			9.6665			9.7321
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**7.2900e-003**	**0.0691**	**0.0520**	**1.1000e-004**		**3.1500e-003**	**3.1500e-003**		**2.9000e-003**	**2.9000e-003**			**9.6665**			**9.7321**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	8.0000e-005	1.1000e-004	1.0700e-003	0.0000	2.9000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005			0.2253			0.2255
Total	**8.0000e-005**	**1.1000e-004**	**1.0700e-003**	**0.0000**	**2.9000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**			**0.2253**			**0.2255**

3.21 Section 4 - Roadway - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0210	0.1884	0.1596	3.5000e-004		8.5900e-003	8.5900e-003		7.9000e-003	7.9000e-003			30.9441			31.1543
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0210**	**0.1884**	**0.1596**	**3.5000e-004**		**8.5900e-003**	**8.5900e-003**		**7.9000e-003**	**7.9000e-003**			**30.9441**			**31.1543**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	2.4000e-004	3.4000e-004	3.2200e-003	1.0000e-005	9.4000e-004	1.0000e-005	9.5000e-004	2.5000e-004	1.0000e-005	2.6000e-004			0.7091			0.7097
Total	**2.4000e-004**	**3.4000e-004**	**3.2200e-003**	**1.0000e-005**	**9.4000e-004**	**1.0000e-005**	**9.5000e-004**	**2.5000e-004**	**1.0000e-005**	**2.6000e-004**			**0.7091**			**0.7097**

3.21 Section 4 - Roadway - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0210	0.1884	0.1596	3.5000e-004		8.5900e-003	8.5900e-003		7.9000e-003	7.9000e-003			30.9441			31.1543
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0210**	**0.1884**	**0.1596**	**3.5000e-004**		**8.5900e-003**	**8.5900e-003**		**7.9000e-003**	**7.9000e-003**			**30.9441**			**31.1543**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	2.4000e-004	3.4000e-004	3.2200e-003	1.0000e-005	9.4000e-004	1.0000e-005	9.5000e-004	2.5000e-004	1.0000e-005	2.6000e-004			0.7091			0.7097
Total	**2.4000e-004**	**3.4000e-004**	**3.2200e-003**	**1.0000e-005**	**9.4000e-004**	**1.0000e-005**	**9.5000e-004**	**2.5000e-004**	**1.0000e-005**	**2.6000e-004**			**0.7091**			**0.7097**

3.22 Section 5 - Roadway - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0210	0.1884	0.1596	3.5000e-004		8.5900e-003	8.5900e-003		7.9000e-003	7.9000e-003			30.9441			31.1543
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0210**	**0.1884**	**0.1596**	**3.5000e-004**		**8.5900e-003**	**8.5900e-003**		**7.9000e-003**	**7.9000e-003**			**30.9441**			**31.1543**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	2.4000e-004	3.4000e-004	3.2200e-003	1.0000e-005	9.4000e-004	1.0000e-005	9.5000e-004	2.5000e-004	1.0000e-005	2.6000e-004			0.7091			0.7097
Total	**2.4000e-004**	**3.4000e-004**	**3.2200e-003**	**1.0000e-005**	**9.4000e-004**	**1.0000e-005**	**9.5000e-004**	**2.5000e-004**	**1.0000e-005**	**2.6000e-004**			**0.7091**			**0.7097**

3.22 Section 5 - Roadway - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0210	0.1884	0.1596	3.5000e-004		8.5900e-003	8.5900e-003		7.9000e-003	7.9000e-003			30.9441			31.1543
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0210**	**0.1884**	**0.1596**	**3.5000e-004**		**8.5900e-003**	**8.5900e-003**		**7.9000e-003**	**7.9000e-003**			**30.9441**			**31.1543**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	2.4000e-004	3.4000e-004	3.2200e-003	1.0000e-005	9.4000e-004	1.0000e-005	9.5000e-004	2.5000e-004	1.0000e-005	2.6000e-004			0.7091			0.7097
Total	**2.4000e-004**	**3.4000e-004**	**3.2200e-003**	**1.0000e-005**	**9.4000e-004**	**1.0000e-005**	**9.5000e-004**	**2.5000e-004**	**1.0000e-005**	**2.6000e-004**			**0.7091**			**0.7097**

3.23 Pond A18 Ecotone Phase 1 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5927	0.0000	0.5927	0.3222	0.0000	0.3222			0.0000			0.0000
Off-Road	0.2708	2.3366	1.9556	5.1200e-003		0.0995	0.0995		0.0915	0.0915			449.5108			452.5638
Total	**0.2708**	**2.3366**	**1.9556**	**5.1200e-003**	**0.5927**	**0.0995**	**0.6921**	**0.3222**	**0.0915**	**0.4137**			**449.5108**			**452.5638**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0432	0.1665	0.8748	5.3000e-004	9.7400e-003	2.0300e-003	0.0118	2.6800e-003	1.8700e-003	4.5600e-003			43.8041			43.8166
Vendor	3.0900e-003	0.0179	0.0425	9.0000e-005	2.5000e-003	3.4000e-004	2.8400e-003	7.2000e-004	3.1000e-004	1.0300e-003			7.7669			7.7682
Worker	2.7500e-003	3.9200e-003	0.0376	1.3000e-004	0.0110	8.0000e-005	0.0111	2.9300e-003	8.0000e-005	3.0000e-003			8.2666			8.2743
Total	**0.0490**	**0.1883**	**0.9548**	**7.5000e-004**	**0.0232**	**2.4500e-003**	**0.0257**	**6.3300e-003**	**2.2600e-003**	**8.5900e-003**			**59.8376**			**59.8591**

3.23 Pond A18 Ecotone Phase 1 - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2667	0.0000	0.2667	0.1450	0.0000	0.1450			0.0000			0.0000
Off-Road	0.2708	2.3366	1.9556	5.1200e-003		0.0995	0.0995		0.0915	0.0915			449.5103			452.5633
Total	**0.2708**	**2.3366**	**1.9556**	**5.1200e-003**	**0.2667**	**0.0995**	**0.3662**	**0.1450**	**0.0915**	**0.2365**			**449.5103**			**452.5633**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0432	0.1665	0.8748	5.3000e-004	9.7400e-003	2.0300e-003	0.0118	2.6800e-003	1.8700e-003	4.5600e-003			43.8041			43.8166
Vendor	3.0900e-003	0.0179	0.0425	9.0000e-005	2.5000e-003	3.4000e-004	2.8400e-003	7.2000e-004	3.1000e-004	1.0300e-003			7.7669			7.7682
Worker	2.7500e-003	3.9200e-003	0.0376	1.3000e-004	0.0110	8.0000e-005	0.0111	2.9300e-003	8.0000e-005	3.0000e-003			8.2666			8.2743
Total	**0.0490**	**0.1883**	**0.9548**	**7.5000e-004**	**0.0232**	**2.4500e-003**	**0.0257**	**6.3300e-003**	**2.2600e-003**	**8.5900e-003**			**59.8376**			**59.8591**

3.24 Pond A18 Ecotone Phase 2 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6009	0.0000	0.6009	0.3283	0.0000	0.3283			0.0000			0.0000
Off-Road	0.2764	2.3847	1.9959	5.2200e-003		0.1015	0.1015		0.0934	0.0934			458.7791			461.8950
Total	**0.2764**	**2.3847**	**1.9959**	**5.2200e-003**	**0.6009**	**0.1015**	**0.7024**	**0.3283**	**0.0934**	**0.4217**			**458.7791**			**461.8950**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0148	0.0571	0.3001	1.8000e-004	3.3400e-003	7.0000e-004	4.0400e-003	9.2000e-004	6.4000e-004	1.5600e-003			15.0294			15.0337
Vendor	3.1500e-003	0.0182	0.0434	9.0000e-005	2.5500e-003	3.5000e-004	2.9000e-003	7.3000e-004	3.2000e-004	1.0500e-003			7.9270			7.9284
Worker	2.8100e-003	4.0000e-003	0.0383	1.3000e-004	0.0112	8.0000e-005	0.0113	2.9900e-003	8.0000e-005	3.0600e-003			8.4370			8.4449
Total	**0.0208**	**0.0794**	**0.3818**	**4.0000e-004**	**0.0171**	**1.1300e-003**	**0.0183**	**4.6400e-003**	**1.0400e-003**	**5.6700e-003**			**31.3935**			**31.4069**

3.24 Pond A18 Ecotone Phase 2 - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2704	0.0000	0.2704	0.1477	0.0000	0.1477			0.0000			0.0000
Off-Road	0.2764	2.3847	1.9959	5.2200e-003		0.1015	0.1015		0.0934	0.0934			458.7785			461.8945
Total	**0.2764**	**2.3847**	**1.9959**	**5.2200e-003**	**0.2704**	**0.1015**	**0.3719**	**0.1477**	**0.0934**	**0.2411**			**458.7785**			**461.8945**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0148	0.0571	0.3001	1.8000e-004	3.3400e-003	7.0000e-004	4.0400e-003	9.2000e-004	6.4000e-004	1.5600e-003			15.0294			15.0337
Vendor	3.1500e-003	0.0182	0.0434	9.0000e-005	2.5500e-003	3.5000e-004	2.9000e-003	7.3000e-004	3.2000e-004	1.0500e-003			7.9270			7.9284
Worker	2.8100e-003	4.0000e-003	0.0383	1.3000e-004	0.0112	8.0000e-005	0.0113	2.9900e-003	8.0000e-005	3.0600e-003			8.4370			8.4449
Total	**0.0208**	**0.0794**	**0.3818**	**4.0000e-004**	**0.0171**	**1.1300e-003**	**0.0183**	**4.6400e-003**	**1.0400e-003**	**5.6700e-003**			**31.3935**			**31.4069**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546690	0.063179	0.174273	0.121979	0.033815	0.004830	0.015501	0.025302	0.002100	0.003252	0.006757	0.000658	0.001666

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**			**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**			**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000			0.0000
Total		**0.0000**			**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000			0.0000
Total		**0.0000**			**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000			2.0000e-005			2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000			2.0000e-005			2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000			2.0000e-005			2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**2.0000e-005**			**2.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000			2.0000e-005			2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**2.0000e-005**			**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000			0.0000
Unmitigated	0.0000			0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000			0.0000
Total		**0.0000**			**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000			0.0000
Total		**0.0000**			**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000			0.0000
Unmitigated	0.0000			0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000			0.0000
Total		**0.0000**			**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000			0.0000
Total		**0.0000**			**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Shoreline - Alt2 - NED

San Francisco Bay Area Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	1.00	User Defined Unit	3,000.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project will allow approximately 3,000 acres of former salt pond to be restored

Construction Phase - Estimated construction dates

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using assumed equipment from original AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

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Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Trips and VMT - # workers = pieces of equipment x 1.25
4 miles RT assumed for hauling

Demolition - No Demo

Grading - Section 1 = 4380', Section 2=2120', Section 3=2975', Section 4=5525', Section 5=4775' x 108' width + 30' TCE on each side. Degrade=45' width. Ecotone=50' width (1/10 material as LPP)

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	15,500.00	65.00
tblConstructionPhase	NumDays	15,500.00	88.00
tblConstructionPhase	NumDays	15,500.00	86.00
tblConstructionPhase	NumDays	15,500.00	151.00
tblConstructionPhase	NumDays	15,500.00	140.00
tblConstructionPhase	NumDays	15,500.00	88.00

tblConstructionPhase	NumDays	15,500.00	97.00
tblConstructionPhase	NumDays	15,500.00	99.00
tblConstructionPhase	NumDays	15,500.00	32.00
tblConstructionPhase	NumDays	15,500.00	152.00
tblConstructionPhase	NumDays	15,500.00	109.00
tblConstructionPhase	NumDays	15,500.00	43.00
tblConstructionPhase	NumDays	15,500.00	151.00
tblConstructionPhase	NumDays	11,000.00	11.00
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	11,000.00	21.00
tblConstructionPhase	NumDays	11,000.00	16.00
tblConstructionPhase	NumDays	6,000.00	22.00
tblConstructionPhase	NumDays	6,000.00	23.00
tblConstructionPhase	NumDays	6,000.00	21.00
tblConstructionPhase	NumDays	6,000.00	12.00
tblConstructionPhase	NumDays	6,000.00	21.00
tblGrading	AcresOfGrading	455.00	4.52
tblGrading	AcresOfGrading	616.00	5.71
tblGrading	AcresOfGrading	602.00	4.93
tblGrading	AcresOfGrading	830.50	17.50
tblGrading	AcresOfGrading	770.00	15.13
tblGrading	AcresOfGrading	44.00	5.03
tblGrading	AcresOfGrading	48.50	6.34
tblGrading	AcresOfGrading	49.50	5.48
tblGrading	AcresOfGrading	224.00	2.19
tblGrading	AcresOfGrading	836.00	13.88
tblGrading	AcresOfGrading	599.50	6.72

tblGrading	AcresOfGrading	301.00	3.07
tblGrading	AcresOfGrading	830.50	9.42
tblGrading	AcresOfGrading	88.00	0.00
tblGrading	AcresOfGrading	92.00	0.00
tblGrading	AcresOfGrading	84.00	0.00
tblGrading	AcresOfGrading	48.00	0.00
tblGrading	AcresOfGrading	84.00	0.00
tblGrading	MaterialExported	0.00	51,571.00
tblGrading	MaterialExported	0.00	135,170.00
tblGrading	MaterialExported	0.00	123,678.00
tblGrading	MaterialExported	0.00	39,338.00
tblGrading	MaterialExported	0.00	59,191.00
tblGrading	MaterialImported	0.00	248,150.00
tblGrading	MaterialImported	0.00	148,220.00
tblGrading	MaterialImported	0.00	60,674.00
tblGrading	MaterialImported	0.00	91,420.00
tblGrading	MaterialImported	0.00	31,367.00
tblGrading	MaterialImported	0.00	160,944.00
tblGrading	MaterialImported	0.00	78,335.00
tblGrading	MaterialImported	0.00	139,938.00
tblLandUse	LotAcreage	0.00	3,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	7.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	7.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	7.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	HaulingTripLength	20.00	2.00
tblTripsAndVMT	HaulingTripLength	20.00	2.00
tblTripsAndVMT	HaulingTripLength	20.00	2.00
tblTripsAndVMT	HaulingTripLength	20.00	2.00
tblTripsAndVMT	HaulingTripLength	20.00	2.00
tblTripsAndVMT	HaulingTripLength	20.00	2.00
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tblTripsAndVMT	HaulingTripLength	20.00	2.00
tblTripsAndVMT	HaulingTripLength	20.00	2.00
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tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00

tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	23.6174	260.5964	168.6371	0.3022	13.3116	10.5517	23.8633	6.9277	9.7074	16.6351			30,695.9019			30,881.9797
2018	20.6740	222.5486	150.5215	0.3040	35.9925	8.8424	44.4557	12.4987	8.1349	20.2847			30,364.6400			30,550.7484
2019	19.0757	199.0321	143.6584	0.3057	17.0631	7.5198	24.5135	6.8600	6.9182	13.7782			30,029.7157			30,215.7694
2020	17.8634	178.0466	137.2812	0.3045	13.3242	6.7845	20.1086	6.9238	6.2417	13.1655			29,251.8842			29,437.8289
2021	16.5009	153.1879	130.3292	0.2970	21.2454	5.9441	27.1895	8.8681	5.4686	14.3367			28,495.9704			28,674.0923
2022	6.4857	51.9350	54.4118	0.1211	12.7166	2.1008	14.8174	6.7788	1.9327	8.7116			11,599.2597			11,669.1269
Total	**104.2172**	**1,065.3466**	**784.8392**	**1.6345**	**113.6534**	**41.7432**	**154.9481**	**48.8572**	**38.4035**	**86.9118**			**160,437.3720**			**161,429.5457**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	23.6174	260.5964	168.6371	0.3022	6.5682	10.5517	17.1199	3.2707	9.7074	12.9781			30,695.9019			30,881.9797
2018	20.6740	222.5486	150.5215	0.3040	29.2742	8.8424	37.7374	8.8448	8.1349	16.6308			30,364.6400			30,550.7484
2019	19.0757	199.0321	143.6584	0.3057	13.6280	7.5198	21.0785	4.1784	6.9182	11.0328			30,029.7157			30,215.7694
2020	17.8634	178.0466	137.2812	0.3045	6.5301	6.7845	13.3145	3.2598	6.2417	9.5015			29,251.8842			29,437.8289
2021	16.5009	153.1879	130.3292	0.2970	14.4513	5.9441	20.3954	5.2041	5.4686	10.6727			28,495.9704			28,674.0923
2022	6.4857	51.9350	54.4118	0.1211	5.9955	2.1008	8.0963	3.1246	1.9327	5.0573			11,599.2597			11,669.1269
Total	**104.2172**	**1,065.3466**	**784.8392**	**1.6345**	**76.4473**	**41.7432**	**117.7420**	**27.8823**	**38.4035**	**65.8732**			**160,437.3719**			**161,429.5455**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**32.74**	**0.00**	**24.01**	**42.93**	**0.00**	**24.21**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.2000e-004			2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**2.2000e-004**			**2.3000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.2000e-004			2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**2.2000e-004**			**2.3000e-004**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Section 1 - Degrade	Grading	4/1/2017	6/30/2017	5	65	
2	Section 1 - Stripping	Site Preparation	7/1/2017	7/31/2017	5	21	
3	Section 2 - Degrade	Grading	8/1/2017	9/13/2017	5	32	
4	Section 1 - Placement	Grading	9/14/2017	4/13/2018	5	152	
5	Section 2 - Stripping	Site Preparation	4/14/2018	5/1/2018	5	12	
6	Section 2 - Placement	Grading	5/2/2018	10/1/2018	5	109	
7	Section 3 - Degrade	Grading	10/2/2018	11/29/2018	5	43	
8	Section 3 - Stripping	Site Preparation	11/30/2018	12/28/2018	5	21	
9	Section 3 - Placement	Grading	12/29/2018	7/29/2019	5	151	
10	Section 2 - Roadway	Paving	7/30/2019	8/13/2019	5	11	
11	Section 1 - Roadway	Paving	8/14/2019	8/27/2019	5	10	
12	Section 4 - Degrade	Grading	8/28/2019	12/27/2019	5	88	
13	Section 5 - Degrade	Grading	12/28/2019	4/27/2020	5	86	
14	Section 3 - Roadway	Paving	4/28/2020	5/11/2020	5	10	
15	Section 4 - Stripping	Site Preparation	5/12/2020	6/10/2020	5	22	
16	Section 4 - Placement	Grading	6/11/2020	1/7/2021	5	151	
17	Section 5 - Stripping	Site Preparation	1/8/2021	2/9/2021	5	23	
18	Section 5 - Placement	Grading	2/10/2021	8/24/2021	5	140	
19	Pond A12 Ecotone	Grading	8/25/2021	12/24/2021	5	88	
20	Section 4 - Roadway	Paving	12/25/2021	1/24/2022	5	21	
21	Section 5 - Roadway	Paving	1/25/2022	2/15/2022	5	16	
22	Pond A18 Ecotone Phase 1	Grading	2/16/2022	6/30/2022	5	97	
23	Pond A18 Ecotone Phase 2	Grading	7/1/2022	11/16/2022	5	99	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Section 1 - Degrade	Excavators	2	8.00	162	0.38
Section 1 - Degrade	Graders	0	8.00	174	0.41
Section 1 - Degrade	Off-Highway Trucks	12	8.00	400	0.38
Section 1 - Degrade	Rubber Tired Dozers	1	8.00	255	0.40
Section 1 - Degrade	Scrapers	7	8.00	361	0.48
Section 1 - Degrade	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 1 - Stripping	Excavators	1	8.00	162	0.38
Section 1 - Stripping	Off-Highway Trucks	6	8.00	400	0.38
Section 1 - Stripping	Rubber Tired Dozers	1	8.00	255	0.40
Section 1 - Stripping	Scrapers	4	8.00	361	0.48
Section 1 - Stripping	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 2 - Degrade	Excavators	2	8.00	162	0.38
Section 2 - Degrade	Graders	0	8.00	174	0.41
Section 2 - Degrade	Off-Highway Trucks	12	8.00	400	0.38
Section 2 - Degrade	Rubber Tired Dozers	1	8.00	255	0.40
Section 2 - Degrade	Scrapers	7	8.00	361	0.48
Section 2 - Degrade	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 1 - Placement	Excavators	2	8.00	162	0.38
Section 1 - Placement	Graders	1	8.00	174	0.41
Section 1 - Placement	Off-Highway Trucks	12	8.00	400	0.38
Section 1 - Placement	Rollers	1	8.00	80	0.38
Section 1 - Placement	Rubber Tired Dozers	2	8.00	255	0.40
Section 1 - Placement	Scrapers	5	8.00	361	0.48

Section 1 - Placement	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Section 2 - Stripping	Excavators	1	8.00	162	0.38
Section 2 - Stripping	Off-Highway Trucks	6	8.00	400	0.38
Section 2 - Stripping	Rubber Tired Dozers	1	8.00	255	0.40
Section 2 - Stripping	Scrapers	4	8.00	361	0.48
Section 2 - Stripping	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 2 - Placement	Excavators	2	8.00	162	0.38
Section 2 - Placement	Graders	1	8.00	174	0.41
Section 2 - Placement	Off-Highway Trucks	12	8.00	400	0.38
Section 2 - Placement	Rollers	1	8.00	80	0.38
Section 2 - Placement	Rubber Tired Dozers	2	8.00	255	0.40
Section 2 - Placement	Scrapers	5	8.00	361	0.48
Section 2 - Placement	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 3 - Degrade	Excavators	2	8.00	162	0.38
Section 3 - Degrade	Graders	0	8.00	174	0.41
Section 3 - Degrade	Off-Highway Trucks	12	8.00	400	0.38
Section 3 - Degrade	Rubber Tired Dozers	1	8.00	255	0.40
Section 3 - Degrade	Scrapers	7	8.00	361	0.48
Section 3 - Degrade	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 3 - Stripping	Excavators	1	8.00	162	0.38
Section 3 - Stripping	Off-Highway Trucks	6	8.00	400	0.38
Section 3 - Stripping	Rubber Tired Dozers	1	8.00	255	0.40
Section 3 - Stripping	Scrapers	4	8.00	361	0.48
Section 3 - Stripping	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 3 - Placement	Excavators	2	8.00	162	0.38
Section 3 - Placement	Graders	1	8.00	174	0.41
Section 3 - Placement	Off-Highway Trucks	12	8.00	400	0.38
Section 3 - Placement	Rollers	1	8.00	80	0.38

Section 3 - Placement	Rubber Tired Dozers		2	8.00	255	0.40
Section 3 - Placement	Scrapers		5	8.00	361	0.48
Section 3 - Placement	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 2 - Roadway	Graders		1	8.00	174	0.41
Section 2 - Roadway	Off-Highway Trucks		2	8.00	400	0.38
Section 2 - Roadway	Pavers		0	8.00	125	0.42
Section 2 - Roadway	Paving Equipment		0	8.00	130	0.36
Section 2 - Roadway	Rollers		1	8.00	80	0.38
Section 2 - Roadway	Rubber Tired Dozers		1	8.00	255	0.40
Section 1 - Roadway	Graders		1	8.00	174	0.41
Section 1 - Roadway	Off-Highway Trucks		2	8.00	400	0.38
Section 1 - Roadway	Pavers		0	8.00	125	0.42
Section 1 - Roadway	Paving Equipment		0	8.00	130	0.36
Section 1 - Roadway	Rollers		1	8.00	80	0.38
Section 1 - Roadway	Rubber Tired Dozers		1	8.00	255	0.40
Section 4 - Degrade	Excavators		2	8.00	162	0.38
Section 4 - Degrade	Graders		0	8.00	174	0.41
Section 4 - Degrade	Off-Highway Trucks		12	8.00	400	0.38
Section 4 - Degrade	Rubber Tired Dozers		1	8.00	255	0.40
Section 4 - Degrade	Scrapers		7	8.00	361	0.48
Section 4 - Degrade	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 5 - Degrade	Excavators		2	8.00	162	0.38
Section 5 - Degrade	Graders		0	8.00	174	0.41
Section 5 - Degrade	Off-Highway Trucks		12	8.00	400	0.38
Section 5 - Degrade	Rubber Tired Dozers		1	8.00	255	0.40
Section 5 - Degrade	Scrapers		7	8.00	361	0.48
Section 5 - Degrade	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 3 - Roadway	Graders		1	8.00	174	0.41

Section 3 - Roadway	Off-Highway Trucks		2	8.00	400	0.38
Section 3 - Roadway	Pavers		0	8.00	125	0.42
Section 3 - Roadway	Paving Equipment		0	8.00	130	0.36
Section 3 - Roadway	Rollers		1	8.00	80	0.38
Section 3 - Roadway	Rubber Tired Dozers		1	8.00	255	0.40
Section 4 - Stripping	Excavators		1	8.00	162	0.38
Section 4 - Stripping	Off-Highway Trucks		6	8.00	400	0.38
Section 4 - Stripping	Rubber Tired Dozers		1	8.00	255	0.40
Section 4 - Stripping	Scrapers		4	8.00	361	0.48
Section 4 - Stripping	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 4 - Placement	Excavators		2	8.00	162	0.38
Section 4 - Placement	Graders		1	8.00	174	0.41
Section 4 - Placement	Off-Highway Trucks		12	8.00	400	0.38
Section 4 - Placement	Rollers		1	8.00	80	0.38
Section 4 - Placement	Rubber Tired Dozers		2	8.00	255	0.40
Section 4 - Placement	Scrapers		5	8.00	361	0.48
Section 4 - Placement	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 5 - Stripping	Excavators		1	8.00	162	0.38
Section 5 - Stripping	Off-Highway Trucks		6	8.00	400	0.38
Section 5 - Stripping	Rubber Tired Dozers		1	8.00	255	0.40
Section 5 - Stripping	Scrapers		4	8.00	361	0.48
Section 5 - Stripping	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 5 - Placement	Excavators		2	8.00	162	0.38
Section 5 - Placement	Graders		1	8.00	174	0.41
Section 5 - Placement	Off-Highway Trucks		12	8.00	400	0.38
Section 5 - Placement	Rollers		1	8.00	80	0.38
Section 5 - Placement	Rubber Tired Dozers		2	8.00	255	0.40
Section 5 - Placement	Scrapers		5	8.00	361	0.48

Section 5 - Placement	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Pond A12 Ecotone	Excavators		0	8.00	162	0.38
Pond A12 Ecotone	Graders		1	8.00	174	0.41
Pond A12 Ecotone	Off-Highway Trucks		6	8.00	400	0.38
Pond A12 Ecotone	Rollers		1	8.00	80	0.38
Pond A12 Ecotone	Rubber Tired Dozers		2	8.00	255	0.40
Pond A12 Ecotone	Scrapers		0	8.00	361	0.48
Pond A12 Ecotone	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 4 - Roadway	Graders		1	8.00	174	0.41
Section 4 - Roadway	Off-Highway Trucks		2	8.00	400	0.38
Section 4 - Roadway	Pavers		0	8.00	125	0.42
Section 4 - Roadway	Paving Equipment		0	8.00	130	0.36
Section 4 - Roadway	Rollers		1	8.00	80	0.38
Section 4 - Roadway	Rubber Tired Dozers		1	8.00	255	0.40
Section 5 - Roadway	Graders		1	8.00	174	0.41
Section 5 - Roadway	Off-Highway Trucks		2	8.00	400	0.38
Section 5 - Roadway	Pavers		0	8.00	125	0.42
Section 5 - Roadway	Paving Equipment		0	8.00	130	0.36
Section 5 - Roadway	Rollers		1	8.00	80	0.38
Section 5 - Roadway	Rubber Tired Dozers		1	8.00	255	0.40
Pond A18 Ecotone Phase 1	Excavators		0	8.00	162	0.38
Pond A18 Ecotone Phase 1	Graders		1	8.00	174	0.41
Pond A18 Ecotone Phase 1	Off-Highway Trucks		6	8.00	400	0.38
Pond A18 Ecotone Phase 1	Rollers		1	8.00	80	0.38
Pond A18 Ecotone Phase 1	Rubber Tired Dozers		2	8.00	255	0.40
Pond A18 Ecotone Phase 1	Scrapers		0	8.00	361	0.48
Pond A18 Ecotone Phase 1	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Pond A18 Ecotone Phase 2	Excavators		0	8.00	162	0.38

Pond A18 Ecotone Phase 2	Graders		1	8.00	174	0.41
Pond A18 Ecotone Phase 2	Off-Highway Trucks		6	8.00	400	0.38
Pond A18 Ecotone Phase 2	Rollers		1	8.00	80	0.38
Pond A18 Ecotone Phase 2	Rubber Tired Dozers		2	8.00	255	0.40
Pond A18 Ecotone Phase 2	Scrapers		0	8.00	361	0.48
Pond A18 Ecotone Phase 2	Tractors/Loaders/Backhoes		0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Section 1 - Degrade	22	55.00	0.00	6,446.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 1 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 2 - Degrade	22	55.00	0.00	4,917.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 1 - Placement	25	63.00	8.00	20,118.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 2 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 2 - Placement	23	58.00	8.00	9,792.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 3 - Degrade	22	55.00	0.00	7,399.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 3 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 3 - Placement	23	58.00	8.00	17,492.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 2 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Section 1 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Section 4 - Degrade	22	55.00	0.00	16,896.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 5 - Degrade	22	55.00	0.00	15,460.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 3 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Section 4 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 4 - Placement	23	58.00	8.00	31,019.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 5 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 5 - Placement	23	58.00	8.00	18,528.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Pond A12 Ecotone	10	25.00	8.00	7,584.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 4 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Section 5 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond A18 Ecotone Phase 1	10	25.00	8.00	11,428.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Pond A18 Ecotone Phase 2	10	25.00	8.00	3,921.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Section 1 - Degrade - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1856	0.0000	6.1856	3.3318	0.0000	3.3318			0.0000			0.0000
Off-Road	21.4723	253.4665	144.3950	0.2815		9.9728	9.9728		9.1750	9.1750			28,787.1510			28,972.3779
Total	**21.4723**	**253.4665**	**144.3950**	**0.2815**	**6.1856**	**9.9728**	**16.1584**	**3.3318**	**9.1750**	**12.5068**			**28,787.1510**			**28,972.3779**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0081	4.4473	13.8448	9.2600e-003	0.1747	0.0384	0.2130	0.0480	0.0352	0.0832			899.0460			899.2548
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1993	0.2392	2.7906	6.3800e-003	0.5187	3.9700e-003	0.5226	0.1376	3.6600e-003	0.1412			515.7379			516.2652
Total	**1.2074**	**4.6865**	**16.6353**	**0.0156**	**0.6933**	**0.0424**	**0.7357**	**0.1856**	**0.0388**	**0.2244**			**1,414.7838**			**1,415.5200**

3.2 Section 1 - Degrade - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7835	0.0000	2.7835	1.4993	0.0000	1.4993			0.0000			0.0000
Off-Road	21.4723	253.4665	144.3950	0.2815		9.9728	9.9728		9.1750	9.1750			28,787.1510			28,972.3779
Total	**21.4723**	**253.4665**	**144.3950**	**0.2815**	**2.7835**	**9.9728**	**12.7563**	**1.4993**	**9.1750**	**10.6743**			**28,787.1510**			**28,972.3779**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0081	4.4473	13.8448	9.2600e-003	0.1747	0.0384	0.2130	0.0480	0.0352	0.0832			899.0460			899.2548
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1993	0.2392	2.7906	6.3800e-003	0.5187	3.9700e-003	0.5226	0.1376	3.6600e-003	0.1412			515.7379			516.2652
Total	**1.2074**	**4.6865**	**16.6353**	**0.0156**	**0.6933**	**0.0424**	**0.7357**	**0.1856**	**0.0388**	**0.2244**			**1,414.7838**			**1,415.5200**

3.3 Section 1 - Stripping - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	11.9809	141.4887	82.2669	0.1526		5.6203	5.6203		5.1706	5.1706			15,610.2562			15,710.6983
Total	**11.9809**	**141.4887**	**82.2669**	**0.1526**	**6.0221**	**5.6203**	**11.6423**	**3.3102**	**5.1706**	**8.4809**			**15,610.2562**			**15,710.6983**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1087	0.1305	1.5221	3.4800e-003	0.2829	2.1700e-003	0.2851	0.0750	2.0000e-003	0.0770			281.3116			281.5992
Total	**0.1087**	**0.1305**	**1.5221**	**3.4800e-003**	**0.2829**	**2.1700e-003**	**0.2851**	**0.0750**	**2.0000e-003**	**0.0770**			**281.3116**			**281.5992**

3.3 Section 1 - Stripping - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7099	0.0000	2.7099	1.4896	0.0000	1.4896			0.0000			0.0000
Off-Road	11.9809	141.4887	82.2669	0.1526		5.6203	5.6203		5.1706	5.1706			15,610.2562			15,710.6983
Total	**11.9809**	**141.4887**	**82.2669**	**0.1526**	**2.7099**	**5.6203**	**8.3302**	**1.4896**	**5.1706**	**6.6602**			**15,610.2562**			**15,710.6983**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1087	0.1305	1.5221	3.4800e-003	0.2829	2.1700e-003	0.2851	0.0750	2.0000e-003	0.0770			281.3116			281.5992
Total	**0.1087**	**0.1305**	**1.5221**	**3.4800e-003**	**0.2829**	**2.1700e-003**	**0.2851**	**0.0750**	**2.0000e-003**	**0.0770**			**281.3116**			**281.5992**

3.4 Section 2 - Degrade - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2337	0.0000	6.2337	3.3391	0.0000	3.3391			0.0000			0.0000
Off-Road	21.4723	253.4665	144.3950	0.2815		9.9728	9.9728		9.1750	9.1750			28,787.1510			28,972.3779
Total	**21.4723**	**253.4665**	**144.3950**	**0.2815**	**6.2337**	**9.9728**	**16.2065**	**3.3391**	**9.1750**	**12.5141**			**28,787.1510**			**28,972.3779**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.5620	6.8908	21.4516	0.0143	0.2706	0.0595	0.3301	0.0744	0.0545	0.1289			1,393.0130			1,393.3366
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1993	0.2392	2.7906	6.3800e-003	0.5187	3.9700e-003	0.5226	0.1376	3.6600e-003	0.1412			515.7379			516.2652
Total	**1.7612**	**7.1300**	**24.2421**	**0.0207**	**0.7893**	**0.0634**	**0.8527**	**0.2119**	**0.0582**	**0.2701**			**1,908.7509**			**1,909.6018**

3.4 Section 2 - Degrade - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8052	0.0000	2.8052	1.5026	0.0000	1.5026			0.0000			0.0000
Off-Road	21.4723	253.4665	144.3950	0.2815		9.9728	9.9728		9.1750	9.1750			28,787.1510			28,972.3779
Total	**21.4723**	**253.4665**	**144.3950**	**0.2815**	**2.8052**	**9.9728**	**12.7780**	**1.5026**	**9.1750**	**10.6776**			**28,787.1510**			**28,972.3779**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.5620	6.8908	21.4516	0.0143	0.2706	0.0595	0.3301	0.0744	0.0545	0.1289			1,393.0130			1,393.3366
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1993	0.2392	2.7906	6.3800e-003	0.5187	3.9700e-003	0.5226	0.1376	3.6600e-003	0.1412			515.7379			516.2652
Total	**1.7612**	**7.1300**	**24.2421**	**0.0207**	**0.7893**	**0.0634**	**0.8527**	**0.2119**	**0.0582**	**0.2701**			**1,908.7509**			**1,909.6018**

3.5 Section 1 - Placement - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2608	0.0000	12.2608	6.6490	0.0000	6.6490			0.0000			0.0000
Off-Road	21.9615	252.6530	145.5556	0.2757		10.4856	10.4856		9.6468	9.6468			28,192.7493			28,374.1517
Total	**21.9615**	**252.6530**	**145.5556**	**0.2757**	**12.2608**	**10.4856**	**22.7464**	**6.6490**	**9.6468**	**16.2958**			**28,192.7493**			**28,374.1517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.3454	5.9356	18.4778	0.0124	0.4036	0.0512	0.4548	0.1059	0.0470	0.1528			1,199.9031			1,200.1818
Vendor	0.0822	0.6950	0.8568	1.9000e-003	0.0532	0.0103	0.0635	0.0152	9.4700e-003	0.0247			188.0955			188.1257
Worker	0.2283	0.2740	3.1965	7.3100e-003	0.5941	4.5500e-003	0.5987	0.1576	4.1900e-003	0.1618			590.7543			591.3583
Total	**1.6559**	**6.9045**	**22.5311**	**0.0216**	**1.0509**	**0.0661**	**1.1169**	**0.2787**	**0.0606**	**0.3393**			**1,978.7528**			**1,979.6658**

3.5 Section 1 - Placement - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5173	0.0000	5.5173	2.9921	0.0000	2.9921			0.0000			0.0000
Off-Road	21.9615	252.6530	145.5556	0.2757		10.4856	10.4856		9.6468	9.6468			28,192.7493			28,374.1516
Total	**21.9615**	**252.6530**	**145.5556**	**0.2757**	**5.5173**	**10.4856**	**16.0030**	**2.9921**	**9.6468**	**12.6388**			**28,192.7493**			**28,374.1516**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.3454	5.9356	18.4778	0.0124	0.4036	0.0512	0.4548	0.1059	0.0470	0.1528			1,199.9031			1,200.1818
Vendor	0.0822	0.6950	0.8568	1.9000e-003	0.0532	0.0103	0.0635	0.0152	9.4700e-003	0.0247			188.0955			188.1257
Worker	0.2283	0.2740	3.1965	7.3100e-003	0.5941	4.5500e-003	0.5987	0.1576	4.1900e-003	0.1618			590.7543			591.3583
Total	**1.6559**	**6.9045**	**22.5311**	**0.0216**	**1.0509**	**0.0661**	**1.1169**	**0.2787**	**0.0606**	**0.3393**			**1,978.7528**			**1,979.6658**

3.5 Section 1 - Placement - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2608	0.0000	12.2608	6.6490	0.0000	6.6490			0.0000			0.0000
Off-Road	19.2415	215.0056	129.3030	0.2758		8.7783	8.7783		8.0760	8.0760			27,748.5575			27,929.9661
Total	**19.2415**	**215.0056**	**129.3030**	**0.2758**	**12.2608**	**8.7783**	**21.0391**	**6.6490**	**8.0760**	**14.7251**			**27,748.5575**			**27,929.9661**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1540	5.5137	16.6630	0.0123	0.4128	0.0502	0.4629	0.1082	0.0461	0.1542			1,177.7791			1,178.0630
Vendor	0.0736	0.6297	0.7799	1.9000e-003	0.0532	9.5400e-003	0.0627	0.0152	8.7700e-003	0.0240			184.7920			184.8217
Worker	0.2049	0.2467	2.8732	7.3100e-003	0.5941	4.4000e-003	0.5985	0.1576	4.0600e-003	0.1616			568.8906			569.4460
Total	**1.4325**	**6.3900**	**20.3161**	**0.0215**	**1.0601**	**0.0641**	**1.1241**	**0.2809**	**0.0589**	**0.3398**			**1,931.4616**			**1,932.3307**

3.5 Section 1 - Placement - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5173	0.0000	5.5173	2.9921	0.0000	2.9921			0.0000			0.0000
Off-Road	19.2415	215.0056	129.3030	0.2758		8.7783	8.7783		8.0760	8.0760			27,748.5575			27,929.9660
Total	**19.2415**	**215.0056**	**129.3030**	**0.2758**	**5.5173**	**8.7783**	**14.2956**	**2.9921**	**8.0760**	**11.0681**			**27,748.5575**			**27,929.9660**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1540	5.5137	16.6630	0.0123	0.4128	0.0502	0.4629	0.1082	0.0461	0.1542			1,177.7791			1,178.0630
Vendor	0.0736	0.6297	0.7799	1.9000e-003	0.0532	9.5400e-003	0.0627	0.0152	8.7700e-003	0.0240			184.7920			184.8217
Worker	0.2049	0.2467	2.8732	7.3100e-003	0.5941	4.4000e-003	0.5985	0.1576	4.0600e-003	0.1616			568.8906			569.4460
Total	**1.4325**	**6.3900**	**20.3161**	**0.0215**	**1.0601**	**0.0641**	**1.1241**	**0.2809**	**0.0589**	**0.3398**			**1,931.4616**			**1,932.3307**

3.6 Section 2 - Stripping - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	10.5019	120.4106	71.9780	0.1527		4.7087	4.7087		4.3320	4.3320			15,366.4498			15,466.9093
Total	**10.5019**	**120.4106**	**71.9780**	**0.1527**	**6.0221**	**4.7087**	**10.7308**	**3.3102**	**4.3320**	**7.6422**			**15,366.4498**			**15,466.9093**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0976	0.1175	1.3682	3.4800e-003	0.2829	2.0900e-003	0.2850	0.0750	1.9400e-003	0.0770			270.9003			271.1648
Total	**0.0976**	**0.1175**	**1.3682**	**3.4800e-003**	**0.2829**	**2.0900e-003**	**0.2850**	**0.0750**	**1.9400e-003**	**0.0770**			**270.9003**			**271.1648**

3.6 Section 2 - Stripping - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7099	0.0000	2.7099	1.4896	0.0000	1.4896			0.0000			0.0000
Off-Road	10.5019	120.4106	71.9780	0.1527		4.7087	4.7087		4.3320	4.3320			15,366.4498			15,466.9093
Total	**10.5019**	**120.4106**	**71.9780**	**0.1527**	**2.7099**	**4.7087**	**7.4186**	**1.4896**	**4.3320**	**5.8216**			**15,366.4498**			**15,466.9093**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0976	0.1175	1.3682	3.4800e-003	0.2829	2.0900e-003	0.2850	0.0750	1.9400e-003	0.0770			270.9003			271.1648
Total	**0.0976**	**0.1175**	**1.3682**	**3.4800e-003**	**0.2829**	**2.0900e-003**	**0.2850**	**0.0750**	**1.9400e-003**	**0.0770**			**270.9003**			**271.1648**

3.7 Section 2 - Placement - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.1908	0.0000	12.1908	6.6398	0.0000	6.6398			0.0000			0.0000
Off-Road	18.7093	209.7462	124.6296	0.2695		8.4057	8.4057		7.7332	7.7332			27,123.0056			27,300.3246
Total	**18.7093**	**209.7462**	**124.6296**	**0.2695**	**12.1908**	**8.4057**	**20.5965**	**6.6398**	**7.7332**	**14.3731**			**27,123.0056**			**27,300.3246**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7832	3.7424	11.3098	8.3400e-003	0.1582	0.0340	0.1923	0.0435	0.0313	0.0747			799.4062			799.5989
Vendor	0.0736	0.6297	0.7799	1.9000e-003	0.0532	9.5400e-003	0.0627	0.0152	8.7700e-003	0.0240			184.7920			184.8217
Worker	0.1887	0.2271	2.6452	6.7300e-003	0.5470	4.0500e-003	0.5510	0.1451	3.7400e-003	0.1488			523.7405			524.2519
Total	**1.0455**	**4.5991**	**14.7349**	**0.0170**	**0.7584**	**0.0476**	**0.8060**	**0.2037**	**0.0438**	**0.2475**			**1,507.9387**			**1,508.6725**

3.7 Section 2 - Placement - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.4859	0.0000	5.4859	2.9879	0.0000	2.9879			0.0000			0.0000
Off-Road	18.7093	209.7462	124.6296	0.2695		8.4057	8.4057		7.7332	7.7332			27,123.0056			27,300.3245
Total	**18.7093**	**209.7462**	**124.6296**	**0.2695**	**5.4859**	**8.4057**	**13.8916**	**2.9879**	**7.7332**	**10.7212**			**27,123.0056**			**27,300.3245**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7832	3.7424	11.3098	8.3400e-003	0.1582	0.0340	0.1923	0.0435	0.0313	0.0747			799.4062			799.5989
Vendor	0.0736	0.6297	0.7799	1.9000e-003	0.0532	9.5400e-003	0.0627	0.0152	8.7700e-003	0.0240			184.7920			184.8217
Worker	0.1887	0.2271	2.6452	6.7300e-003	0.5470	4.0500e-003	0.5510	0.1451	3.7400e-003	0.1488			523.7405			524.2519
Total	**1.0455**	**4.5991**	**14.7349**	**0.0170**	**0.7584**	**0.0476**	**0.8060**	**0.2037**	**0.0438**	**0.2475**			**1,507.9387**			**1,508.6725**

3.8 Section 3 - Degrade - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2535	0.0000	6.2535	3.3420	0.0000	3.3420			0.0000			0.0000
Off-Road	18.7997	215.1651	126.3503	0.2816		8.3272	8.3272		7.6610	7.6610			28,336.8063			28,522.0606
Total	**18.7997**	**215.1651**	**126.3503**	**0.2816**	**6.2535**	**8.3272**	**14.5806**	**3.3420**	**7.6610**	**11.0030**			**28,336.8063**			**28,522.0606**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.5002	7.1682	21.6629	0.0160	0.3031	0.0652	0.3683	0.0833	0.0599	0.1431			1,531.1833			1,531.5524
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1789	0.2153	2.5083	6.3800e-003	0.5187	3.8400e-003	0.5225	0.1376	3.5500e-003	0.1411			496.6505			497.1354
Total	**1.6791**	**7.3835**	**24.1712**	**0.0224**	**0.8217**	**0.0690**	**0.8908**	**0.2208**	**0.0634**	**0.2843**			**2,027.8338**			**2,028.6878**

3.8 Section 3 - Degrade - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8141	0.0000	2.8141	1.5039	0.0000	1.5039			0.0000			0.0000
Off-Road	18.7997	215.1651	126.3503	0.2816		8.3272	8.3272		7.6610	7.6610			28,336.8062			28,522.0605
Total	**18.7997**	**215.1651**	**126.3503**	**0.2816**	**2.8141**	**8.3272**	**11.1412**	**1.5039**	**7.6610**	**9.1649**			**28,336.8062**			**28,522.0605**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.5002	7.1682	21.6629	0.0160	0.3031	0.0652	0.3683	0.0833	0.0599	0.1431			1,531.1833			1,531.5524
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1789	0.2153	2.5083	6.3800e-003	0.5187	3.8400e-003	0.5225	0.1376	3.5500e-003	0.1411			496.6505			497.1354
Total	**1.6791**	**7.3835**	**24.1712**	**0.0224**	**0.8217**	**0.0690**	**0.8908**	**0.2208**	**0.0634**	**0.2843**			**2,027.8338**			**2,028.6878**

3.9 Section 3 - Stripping - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	10.5019	120.4106	71.9780	0.1527		4.7087	4.7087		4.3320	4.3320			15,366.4498			15,466.9093
Total	**10.5019**	**120.4106**	**71.9780**	**0.1527**	**6.0221**	**4.7087**	**10.7308**	**3.3102**	**4.3320**	**7.6422**			**15,366.4498**			**15,466.9093**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0976	0.1175	1.3682	3.4800e-003	0.2829	2.0900e-003	0.2850	0.0750	1.9400e-003	0.0770			270.9003			271.1648
Total	**0.0976**	**0.1175**	**1.3682**	**3.4800e-003**	**0.2829**	**2.0900e-003**	**0.2850**	**0.0750**	**1.9400e-003**	**0.0770**			**270.9003**			**271.1648**

3.9 Section 3 - Stripping - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7099	0.0000	2.7099	1.4896	0.0000	1.4896			0.0000			0.0000
Off-Road	10.5019	120.4106	71.9780	0.1527		4.7087	4.7087		4.3320	4.3320			15,366.4498			15,466.9093
Total	**10.5019**	**120.4106**	**71.9780**	**0.1527**	**2.7099**	**4.7087**	**7.4186**	**1.4896**	**4.3320**	**5.8216**			**15,366.4498**			**15,466.9093**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0976	0.1175	1.3682	3.4800e-003	0.2829	2.0900e-003	0.2850	0.0750	1.9400e-003	0.0770			270.9003			271.1648
Total	**0.0976**	**0.1175**	**1.3682**	**3.4800e-003**	**0.2829**	**2.0900e-003**	**0.2850**	**0.0750**	**1.9400e-003**	**0.0770**			**270.9003**			**271.1648**

3.10 Section 3 - Placement - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2151	0.0000	12.2151	6.6435	0.0000	6.6435			0.0000			0.0000
Off-Road	18.7093	209.7462	124.6296	0.2695		8.4057	8.4057		7.7332	7.7332			27,123.0056			27,300.3246
Total	**18.7093**	**209.7462**	**124.6296**	**0.2695**	**12.2151**	**8.4057**	**20.6208**	**6.6435**	**7.7332**	**14.3767**			**27,123.0056**			**27,300.3246**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0100	4.8258	14.5839	0.0108	23.1772	0.0439	23.2211	5.6949	0.0403	5.7352			1,030.8254			1,031.0739
Vendor	0.0736	0.6297	0.7799	1.9000e-003	0.0532	9.5400e-003	0.0627	0.0152	8.7700e-003	0.0240			184.7920			184.8217
Worker	0.1887	0.2271	2.6452	6.7300e-003	0.5470	4.0500e-003	0.5510	0.1451	3.7400e-003	0.1488			523.7405			524.2519
Total	**1.2723**	**5.6825**	**18.0090**	**0.0194**	**23.7774**	**0.0575**	**23.8349**	**5.8552**	**0.0528**	**5.9080**			**1,739.3580**			**1,740.1475**

3.10 Section 3 - Placement - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.4968	0.0000	5.4968	2.9896	0.0000	2.9896			0.0000			0.0000
Off-Road	18.7093	209.7462	124.6296	0.2695		8.4057	8.4057		7.7332	7.7332			27,123.0056			27,300.3245
Total	**18.7093**	**209.7462**	**124.6296**	**0.2695**	**5.4968**	**8.4057**	**13.9025**	**2.9896**	**7.7332**	**10.7228**			**27,123.0056**			**27,300.3245**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0100	4.8258	14.5839	0.0108	23.1772	0.0439	23.2211	5.6949	0.0403	5.7352			1,030.8254			1,031.0739
Vendor	0.0736	0.6297	0.7799	1.9000e-003	0.0532	9.5400e-003	0.0627	0.0152	8.7700e-003	0.0240			184.7920			184.8217
Worker	0.1887	0.2271	2.6452	6.7300e-003	0.5470	4.0500e-003	0.5510	0.1451	3.7400e-003	0.1488			523.7405			524.2519
Total	**1.2723**	**5.6825**	**18.0090**	**0.0194**	**23.7774**	**0.0575**	**23.8349**	**5.8552**	**0.0528**	**5.9080**			**1,739.3580**			**1,740.1475**

3.10 Section 3 - Placement - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2151	0.0000	12.2151	6.6435	0.0000	6.6435			0.0000			0.0000
Off-Road	17.3013	186.7695	117.6351	0.2695		7.4639	7.4639		6.8667	6.8667			26,678.6853			26,855.9432
Total	**17.3013**	**186.7695**	**117.6351**	**0.2695**	**12.2151**	**7.4639**	**19.6790**	**6.6435**	**6.8667**	**13.5102**			**26,678.6853**			**26,855.9432**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9272	4.5371	13.8268	0.0107	0.2051	0.0431	0.2482	0.0563	0.0396	0.0959			1,012.8856			1,013.1364
Vendor	0.0683	0.5751	0.7343	1.9000e-003	0.0532	8.8600e-003	0.0620	0.0152	8.1500e-003	0.0233			181.6144			181.6433
Worker	0.1726	0.2069	2.4115	6.7300e-003	0.5470	3.9600e-003	0.5509	0.1451	3.6700e-003	0.1487			504.9517			505.4274
Total	**1.1681**	**5.3190**	**16.9726**	**0.0194**	**0.8052**	**0.0559**	**0.8611**	**0.2166**	**0.0515**	**0.2680**			**1,699.4517**			**1,700.2070**

3.10 Section 3 - Placement - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.4968	0.0000	5.4968	2.9896	0.0000	2.9896			0.0000			0.0000
Off-Road	17.3013	186.7695	117.6351	0.2695		7.4639	7.4639		6.8667	6.8667			26,678.6853			26,855.9432
Total	**17.3013**	**186.7695**	**117.6351**	**0.2695**	**5.4968**	**7.4639**	**12.9607**	**2.9896**	**6.8667**	**9.8563**			**26,678.6853**			**26,855.9432**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9272	4.5371	13.8268	0.0107	0.2051	0.0431	0.2482	0.0563	0.0396	0.0959			1,012.8856			1,013.1364
Vendor	0.0683	0.5751	0.7343	1.9000e-003	0.0532	8.8600e-003	0.0620	0.0152	8.1500e-003	0.0233			181.6144			181.6433
Worker	0.1726	0.2069	2.4115	6.7300e-003	0.5470	3.9600e-003	0.5509	0.1451	3.6700e-003	0.1487			504.9517			505.4274
Total	**1.1681**	**5.3190**	**16.9726**	**0.0194**	**0.8052**	**0.0559**	**0.8611**	**0.2166**	**0.0515**	**0.2680**			**1,699.4517**			**1,700.2070**

3.11 Section 2 - Roadway - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4345	35.1666	22.9936	0.0440		1.5998	1.5998		1.4718	1.4718			4,359.643 3			4,388.609 5
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.4345**	**35.1666**	**22.9936**	**0.0440**		**1.5998**	**1.5998**		**1.4718**	**1.4718**			**4,359.643 3**			**4,388.609 5**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0387	0.0464	0.5405	1.5100e-003	0.1226	8.9000e-004	0.1235	0.0325	8.2000e-004	0.0333			113.1788			113.2854
Total	**0.0387**	**0.0464**	**0.5405**	**1.5100e-003**	**0.1226**	**8.9000e-004**	**0.1235**	**0.0325**	**8.2000e-004**	**0.0333**			**113.1788**			**113.2854**

3.11 Section 2 - Roadway - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4345	35.1666	22.9936	0.0440		1.5998	1.5998		1.4718	1.4718			4,359.643 3			4,388.609 5
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.4345**	**35.1666**	**22.9936**	**0.0440**		**1.5998**	**1.5998**		**1.4718**	**1.4718**			**4,359.643 3**			**4,388.609 5**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0387	0.0464	0.5405	1.5100e-003	0.1226	8.9000e-004	0.1235	0.0325	8.2000e-004	0.0333			113.1788			113.2854
Total	**0.0387**	**0.0464**	**0.5405**	**1.5100e-003**	**0.1226**	**8.9000e-004**	**0.1235**	**0.0325**	**8.2000e-004**	**0.0333**			**113.1788**			**113.2854**

3.12 Section 1 - Roadway - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4345	35.1666	22.9936	0.0440		1.5998	1.5998		1.4718	1.4718			4,359.643 3			4,388.609 5
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.4345**	**35.1666**	**22.9936**	**0.0440**		**1.5998**	**1.5998**		**1.4718**	**1.4718**			**4,359.643 3**			**4,388.609 5**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0387	0.0464	0.5405	1.5100e-003	0.1226	8.9000e-004	0.1235	0.0325	8.2000e-004	0.0333			113.1788			113.2854
Total	**0.0387**	**0.0464**	**0.5405**	**1.5100e-003**	**0.1226**	**8.9000e-004**	**0.1235**	**0.0325**	**8.2000e-004**	**0.0333**			**113.1788**			**113.2854**

3.12 Section 1 - Roadway - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4345	35.1666	22.9936	0.0440		1.5998	1.5998		1.4718	1.4718			4,359.6433			4,388.6095
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.4345**	**35.1666**	**22.9936**	**0.0440**		**1.5998**	**1.5998**		**1.4718**	**1.4718**			**4,359.6433**			**4,388.6095**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0387	0.0464	0.5405	1.5100e-003	0.1226	8.9000e-004	0.1235	0.0325	8.2000e-004	0.0333			113.1788			113.2854
Total	**0.0387**	**0.0464**	**0.5405**	**1.5100e-003**	**0.1226**	**8.9000e-004**	**0.1235**	**0.0325**	**8.2000e-004**	**0.0333**			**113.1788**			**113.2854**

3.13 Section 4 - Degrade - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2646	0.0000	6.2646	3.3440	0.0000	3.3440			0.0000			0.0000
Off-Road	17.3752	191.3160	118.4545	0.2816		7.3798	7.3798		6.7894	6.7894			27,872.0816			28,057.2686
Total	**17.3752**	**191.3160**	**118.4545**	**0.2816**	**6.2646**	**7.3798**	**13.6444**	**3.3440**	**6.7894**	**10.1334**			**27,872.0816**			**28,057.2686**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.5368	7.5200	22.9172	0.0178	0.3382	0.0715	0.4096	0.0929	0.0657	0.1586			1,678.8006			1,679.2162
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1637	0.1962	2.2867	6.3800e-003	0.5187	3.7600e-003	0.5224	0.1376	3.4800e-003	0.1410			478.8335			479.2846
Total	**1.7004**	**7.7162**	**25.2039**	**0.0242**	**0.8568**	**0.0752**	**0.9321**	**0.2305**	**0.0692**	**0.2996**			**2,157.6342**			**2,158.5008**

3.13 Section 4 - Degrade - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8191	0.0000	2.8191	1.5048	0.0000	1.5048			0.0000			0.0000
Off-Road	17.3752	191.3160	118.4545	0.2816		7.3798	7.3798		6.7894	6.7894			27,872.0815			28,057.2686
Total	**17.3752**	**191.3160**	**118.4545**	**0.2816**	**2.8191**	**7.3798**	**10.1989**	**1.5048**	**6.7894**	**8.2942**			**27,872.0815**			**28,057.2686**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.5368	7.5200	22.9172	0.0178	0.3382	0.0715	0.4096	0.0929	0.0657	0.1586			1,678.8006			1,679.2162
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1637	0.1962	2.2867	6.3800e-003	0.5187	3.7600e-003	0.5224	0.1376	3.4800e-003	0.1410			478.8335			479.2846
Total	**1.7004**	**7.7162**	**25.2039**	**0.0242**	**0.8568**	**0.0752**	**0.9321**	**0.2305**	**0.0692**	**0.2996**			**2,157.6342**			**2,158.5008**

3.14 Section 5 - Degrade - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2455	0.0000	6.2455	3.3414	0.0000	3.3414			0.0000			0.0000
Off-Road	17.3752	191.3160	118.4545	0.2816		7.3798	7.3798		6.7894	6.7894			27,872.0816			28,057.2686
Total	**17.3752**	**191.3160**	**118.4545**	**0.2816**	**6.2455**	**7.3798**	**13.6253**	**3.3414**	**6.7894**	**10.1309**			**27,872.0816**			**28,057.2686**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.4389	7.0409	21.4571	0.0167	10.2989	0.0669	10.3658	2.5372	0.0615	2.5987			1,571.8421			1,572.2313
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1637	0.1962	2.2867	6.3800e-003	0.5187	3.7600e-003	0.5224	0.1376	3.4800e-003	0.1410			478.8335			479.2846
Total	**1.6025**	**7.2371**	**23.7438**	**0.0230**	**10.8175**	**0.0707**	**10.8882**	**2.6747**	**0.0650**	**2.7397**			**2,050.6757**			**2,051.5158**

3.14 Section 5 - Degrade - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8105	0.0000	2.8105	1.5036	0.0000	1.5036			0.0000			0.0000
Off-Road	17.3752	191.3160	118.4545	0.2816		7.3798	7.3798		6.7894	6.7894			27,872.0815			28,057.2686
Total	**17.3752**	**191.3160**	**118.4545**	**0.2816**	**2.8105**	**7.3798**	**10.1903**	**1.5036**	**6.7894**	**8.2931**			**27,872.0815**			**28,057.2686**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.4389	7.0409	21.4571	0.0167	10.2989	0.0669	10.3658	2.5372	0.0615	2.5987			1,571.8421			1,572.2313
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1637	0.1962	2.2867	6.3800e-003	0.5187	3.7600e-003	0.5224	0.1376	3.4800e-003	0.1410			478.8335			479.2846
Total	**1.6025**	**7.2371**	**23.7438**	**0.0230**	**10.8175**	**0.0707**	**10.8882**	**2.6747**	**0.0650**	**2.7397**			**2,050.6757**			**2,051.5158**

3.14 Section 5 - Degrade - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2455	0.0000	6.2455	3.3414	0.0000	3.3414			0.0000			0.0000
Off-Road	16.2192	171.5102	111.4873	0.2815		6.6124	6.6124		6.0834	6.0834			27,256.9753			27,442.0999
Total	**16.2192**	**171.5102**	**111.4873**	**0.2815**	**6.2455**	**6.6124**	**12.8580**	**3.3414**	**6.0834**	**9.4249**			**27,256.9753**			**27,442.0999**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.3044	6.3557	20.2712	0.0166	0.3223	0.0656	0.3879	0.0884	0.0603	0.1487			1,535.2873			1,535.6832
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1524	0.1807	2.1124	6.3800e-003	0.5187	3.7100e-003	0.5224	0.1376	3.4400e-003	0.1410			459.6216			460.0459
Total	**1.4568**	**6.5365**	**22.3836**	**0.0230**	**0.8410**	**0.0693**	**0.9102**	**0.2260**	**0.0638**	**0.2897**			**1,994.9089**			**1,995.7290**

3.14 Section 5 - Degrade - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8105	0.0000	2.8105	1.5036	0.0000	1.5036			0.0000			0.0000
Off-Road	16.2192	171.5102	111.4873	0.2815		6.6124	6.6124		6.0834	6.0834			27,256.9753			27,442.0999
Total	**16.2192**	**171.5102**	**111.4873**	**0.2815**	**2.8105**	**6.6124**	**9.4229**	**1.5036**	**6.0834**	**7.5871**			**27,256.9753**			**27,442.0999**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.3044	6.3557	20.2712	0.0166	0.3223	0.0656	0.3879	0.0884	0.0603	0.1487			1,535.2873			1,535.6832
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1524	0.1807	2.1124	6.3800e-003	0.5187	3.7100e-003	0.5224	0.1376	3.4400e-003	0.1410			459.6216			460.0459
Total	**1.4568**	**6.5365**	**22.3836**	**0.0230**	**0.8410**	**0.0693**	**0.9102**	**0.2260**	**0.0638**	**0.2897**			**1,994.9089**			**1,995.7290**

3.15 Section 3 - Roadway - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2032	31.7700	21.9676	0.0440		1.4454	1.4454		1.3298	1.3298			4,263.1379			4,292.0924
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.2032**	**31.7700**	**21.9676**	**0.0440**		**1.4454**	**1.4454**		**1.3298**	**1.3298**			**4,263.1379**			**4,292.0924**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0360	0.0427	0.4993	1.5100e-003	0.1226	8.8000e-004	0.1235	0.0325	8.1000e-004	0.0333			108.6378			108.7381
Total	**0.0360**	**0.0427**	**0.4993**	**1.5100e-003**	**0.1226**	**8.8000e-004**	**0.1235**	**0.0325**	**8.1000e-004**	**0.0333**			**108.6378**			**108.7381**

3.15 Section 3 - Roadway - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2032	31.7700	21.9676	0.0440		1.4454	1.4454		1.3298	1.3298			4,263.1379			4,292.0924
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.2032**	**31.7700**	**21.9676**	**0.0440**		**1.4454**	**1.4454**		**1.3298**	**1.3298**			**4,263.1379**			**4,292.0924**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0360	0.0427	0.4993	1.5100e-003	0.1226	8.8000e-004	0.1235	0.0325	8.1000e-004	0.0333			108.6378			108.7381
Total	**0.0360**	**0.0427**	**0.4993**	**1.5100e-003**	**0.1226**	**8.8000e-004**	**0.1235**	**0.0325**	**8.1000e-004**	**0.0333**			**108.6378**			**108.7381**

3.16 Section 4 - Stripping - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	9.0791	96.6090	63.3799	0.1526		3.7647	3.7647		3.4635	3.4635			14,781.5379			14,881.9315
Total	**9.0791**	**96.6090**	**63.3799**	**0.1526**	**6.0221**	**3.7647**	**9.7868**	**3.3102**	**3.4635**	**6.7738**			**14,781.5379**			**14,881.9315**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0831	0.0986	1.1522	3.4800e-003	0.2829	2.0200e-003	0.2849	0.0750	1.8800e-003	0.0769			250.7027			250.9341
Total	**0.0831**	**0.0986**	**1.1522**	**3.4800e-003**	**0.2829**	**2.0200e-003**	**0.2849**	**0.0750**	**1.8800e-003**	**0.0769**			**250.7027**			**250.9341**

3.16 Section 4 - Stripping - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7099	0.0000	2.7099	1.4896	0.0000	1.4896			0.0000			0.0000
Off-Road	9.0791	96.6090	63.3799	0.1526		3.7647	3.7647		3.4635	3.4635			14,781.5378			14,881.9315
Total	**9.0791**	**96.6090**	**63.3799**	**0.1526**	**2.7099**	**3.7647**	**6.4747**	**1.4896**	**3.4635**	**4.9531**			**14,781.5378**			**14,881.9315**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0831	0.0986	1.1522	3.4800e-003	0.2829	2.0200e-003	0.2849	0.0750	1.8800e-003	0.0769			250.7027			250.9341
Total	**0.0831**	**0.0986**	**1.1522**	**3.4800e-003**	**0.2829**	**2.0200e-003**	**0.2849**	**0.0750**	**1.8800e-003**	**0.0769**			**250.7027**			**250.9341**

3.17 Section 4 - Placement - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.3529	0.0000	12.3529	6.6619	0.0000	6.6619			0.0000			0.0000
Off-Road	16.1493	167.5778	111.1993	0.2694		6.6977	6.6977		6.1619	6.1619			26,089.5294			26,266.7249
Total	**16.1493**	**167.5778**	**111.1993**	**0.2694**	**12.3529**	**6.6977**	**19.0506**	**6.6619**	**6.1619**	**12.8237**			**26,089.5294**			**26,266.7249**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.4905	7.2628	23.1643	0.0190	0.3711	0.0749	0.4461	0.1017	0.0689	0.1706			1,754.4034			1,754.8558
Vendor	0.0628	0.4905	0.6900	1.8900e-003	0.0532	7.9300e-003	0.0611	0.0152	7.2900e-003	0.0225			177.4396			177.4676
Worker	0.1607	0.1906	2.2276	6.7300e-003	0.5470	3.9100e-003	0.5509	0.1451	3.6300e-003	0.1487			484.6919			485.1393
Total	**1.7141**	**7.9439**	**26.0819**	**0.0276**	**0.9713**	**0.0868**	**1.0580**	**0.2620**	**0.0798**	**0.3418**			**2,416.5349**			**2,417.4627**

3.17 Section 4 - Placement - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5588	0.0000	5.5588	2.9978	0.0000	2.9978			0.0000			0.0000
Off-Road	16.1493	167.5778	111.1993	0.2694		6.6977	6.6977		6.1619	6.1619			26,089.5294			26,266.7249
Total	**16.1493**	**167.5778**	**111.1993**	**0.2694**	**5.5588**	**6.6977**	**12.2565**	**2.9978**	**6.1619**	**9.1597**			**26,089.5294**			**26,266.7249**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.4905	7.2628	23.1643	0.0190	0.3711	0.0749	0.4461	0.1017	0.0689	0.1706			1,754.4034			1,754.8558
Vendor	0.0628	0.4905	0.6900	1.8900e-003	0.0532	7.9300e-003	0.0611	0.0152	7.2900e-003	0.0225			177.4396			177.4676
Worker	0.1607	0.1906	2.2276	6.7300e-003	0.5470	3.9100e-003	0.5509	0.1451	3.6300e-003	0.1487			484.6919			485.1393
Total	**1.7141**	**7.9439**	**26.0819**	**0.0276**	**0.9713**	**0.0868**	**1.0580**	**0.2620**	**0.0798**	**0.3418**			**2,416.5349**			**2,417.4627**

3.17 Section 4 - Placement - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.3529	0.0000	12.3529	6.6619	0.0000	6.6619			0.0000			0.0000
Off-Road	14.8723	146.1956	105.0952	0.2695		5.8595	5.8595		5.3907	5.3907			26,090.7735			26,267.9774
Total	**14.8723**	**146.1956**	**105.0952**	**0.2695**	**12.3529**	**5.8595**	**18.2124**	**6.6619**	**5.3907**	**12.0526**			**26,090.7735**			**26,267.9774**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.4168	6.4115	22.4856	0.0189	8.2924	0.0736	8.3660	2.0460	0.0677	2.1137			1,751.7655			1,752.2307
Vendor	0.0600	0.4033	0.6635	1.8900e-003	0.0532	7.1400e-003	0.0603	0.0152	6.5700e-003	0.0218			177.2252			177.2532
Worker	0.1518	0.1775	2.0849	6.7300e-003	0.5470	3.9000e-003	0.5509	0.1451	3.6100e-003	0.1487			476.2063			476.6310
Total	**1.6286**	**6.9923**	**25.2341**	**0.0276**	**8.8925**	**0.0846**	**8.9771**	**2.2063**	**0.0779**	**2.2841**			**2,405.1970**			**2,406.1149**

3.17 Section 4 - Placement - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5588	0.0000	5.5588	2.9978	0.0000	2.9978			0.0000			0.0000
Off-Road	14.8723	146.1956	105.0952	0.2695		5.8595	5.8595		5.3907	5.3907			26,090.7734			26,267.9774
Total	**14.8723**	**146.1956**	**105.0952**	**0.2695**	**5.5588**	**5.8595**	**11.4183**	**2.9978**	**5.3907**	**8.3886**			**26,090.7734**			**26,267.9774**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.4168	6.4115	22.4856	0.0189	8.2924	0.0736	8.3660	2.0460	0.0677	2.1137			1,751.7655			1,752.2307
Vendor	0.0600	0.4033	0.6635	1.8900e-003	0.0532	7.1400e-003	0.0603	0.0152	6.5700e-003	0.0218			177.2252			177.2532
Worker	0.1518	0.1775	2.0849	6.7300e-003	0.5470	3.9000e-003	0.5509	0.1451	3.6100e-003	0.1487			476.2063			476.6310
Total	**1.6286**	**6.9923**	**25.2341**	**0.0276**	**8.8925**	**0.0846**	**8.9771**	**2.2063**	**0.0779**	**2.2841**			**2,405.1970**			**2,406.1149**

3.18 Section 5 - Stripping - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	8.3949	84.8828	59.7037	0.1527		3.3154	3.3154		3.0502	3.0502			14,783.1639			14,883.5686
Total	**8.3949**	**84.8828**	**59.7037**	**0.1527**	**6.0221**	**3.3154**	**9.3375**	**3.3102**	**3.0502**	**6.3604**			**14,783.1639**			**14,883.5686**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0785	0.0918	1.0784	3.4800e-003	0.2829	2.0200e-003	0.2849	0.0750	1.8700e-003	0.0769			246.3136			246.5333
Total	**0.0785**	**0.0918**	**1.0784**	**3.4800e-003**	**0.2829**	**2.0200e-003**	**0.2849**	**0.0750**	**1.8700e-003**	**0.0769**			**246.3136**			**246.5333**

3.18 Section 5 - Stripping - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7099	0.0000	2.7099	1.4896	0.0000	1.4896			0.0000			0.0000
Off-Road	8.3949	84.8828	59.7037	0.1527		3.3154	3.3154		3.0502	3.0502			14,783.1639			14,883.5685
Total	**8.3949**	**84.8828**	**59.7037**	**0.1527**	**2.7099**	**3.3154**	**6.0254**	**1.4896**	**3.0502**	**4.5398**			**14,783.1639**			**14,883.5685**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0785	0.0918	1.0784	3.4800e-003	0.2829	2.0200e-003	0.2849	0.0750	1.8700e-003	0.0769			246.3136			246.5333
Total	**0.0785**	**0.0918**	**1.0784**	**3.4800e-003**	**0.2829**	**2.0200e-003**	**0.2849**	**0.0750**	**1.8700e-003**	**0.0769**			**246.3136**			**246.5333**

3.19 Section 5 - Placement - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2785	0.0000	12.2785	6.6510	0.0000	6.6510			0.0000			0.0000
Off-Road	14.8723	146.1956	105.0952	0.2695		5.8595	5.8595		5.3907	5.3907			26,090.7735			26,267.9774
Total	**14.8723**	**146.1956**	**105.0952**	**0.2695**	**12.2785**	**5.8595**	**18.1380**	**6.6510**	**5.3907**	**12.0417**			**26,090.7735**			**26,267.9774**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9128	4.1306	14.4862	0.0122	0.2331	0.0474	0.2805	0.0641	0.0436	0.1077			1,128.5625			1,128.8622
Vendor	0.0600	0.4033	0.6635	1.8900e-003	0.0532	7.1400e-003	0.0603	0.0152	6.5700e-003	0.0218			177.2252			177.2532
Worker	0.1518	0.1775	2.0849	6.7300e-003	0.5470	3.9000e-003	0.5509	0.1451	3.6100e-003	0.1487			476.2063			476.6310
Total	**1.1245**	**4.7114**	**17.2346**	**0.0208**	**0.8333**	**0.0584**	**0.8917**	**0.2243**	**0.0538**	**0.2781**			**1,781.9940**			**1,782.7465**

3.19 Section 5 - Placement - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5253	0.0000	5.5253	2.9929	0.0000	2.9929			0.0000			0.0000
Off-Road	14.8723	146.1956	105.0952	0.2695		5.8595	5.8595		5.3907	5.3907			26,090.7734			26,267.9774
Total	**14.8723**	**146.1956**	**105.0952**	**0.2695**	**5.5253**	**5.8595**	**11.3848**	**2.9929**	**5.3907**	**8.3837**			**26,090.7734**			**26,267.9774**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9128	4.1306	14.4862	0.0122	0.2331	0.0474	0.2805	0.0641	0.0436	0.1077			1,128.5625			1,128.8622
Vendor	0.0600	0.4033	0.6635	1.8900e-003	0.0532	7.1400e-003	0.0603	0.0152	6.5700e-003	0.0218			177.2252			177.2532
Worker	0.1518	0.1775	2.0849	6.7300e-003	0.5470	3.9000e-003	0.5509	0.1451	3.6100e-003	0.1487			476.2063			476.6310
Total	**1.1245**	**4.7114**	**17.2346**	**0.0208**	**0.8333**	**0.0584**	**0.8917**	**0.2243**	**0.0538**	**0.2781**			**1,781.9940**			**1,782.7465**

3.20 Pond A12 Ecotone - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.1828	0.0000	12.1828	6.6388	0.0000	6.6388			0.0000			0.0000
Off-Road	6.2137	57.7176	42.4165	0.1055		2.4449	2.4449		2.2493	2.2493			10,212.5254			10,281.8871
Total	**6.2137**	**57.7176**	**42.4165**	**0.1055**	**12.1828**	**2.4449**	**14.6276**	**6.6388**	**2.2493**	**8.8881**			**10,212.5254**			**10,281.8871**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5944	2.6898	9.4334	7.9400e-003	0.1518	0.0309	0.1827	0.0417	0.0284	0.0701			734.9212			735.1164
Vendor	0.0600	0.4033	0.6635	1.8900e-003	0.0532	7.1400e-003	0.0603	0.0152	6.5700e-003	0.0218			177.2252			177.2532
Worker	0.0654	0.0765	0.8987	2.9000e-003	0.2358	1.6800e-003	0.2374	0.0625	1.5600e-003	0.0641			205.2613			205.4444
Total	**0.7198**	**3.1696**	**10.9956**	**0.0127**	**0.4408**	**0.0397**	**0.4804**	**0.1194**	**0.0365**	**0.1560**			**1,117.4077**			**1,117.8140**

3.20 Pond A12 Ecotone - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.4822	0.0000	5.4822	2.9875	0.0000	2.9875			0.0000			0.0000
Off-Road	6.2137	57.7176	42.4165	0.1055		2.4449	2.4449		2.2493	2.2493			10,212.5254			10,281.8871
Total	**6.2137**	**57.7176**	**42.4165**	**0.1055**	**5.4822**	**2.4449**	**7.9271**	**2.9875**	**2.2493**	**5.2367**			**10,212.5254**			**10,281.8871**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5944	2.6898	9.4334	7.9400e-003	0.1518	0.0309	0.1827	0.0417	0.0284	0.0701			734.9212			735.1164
Vendor	0.0600	0.4033	0.6635	1.8900e-003	0.0532	7.1400e-003	0.0603	0.0152	6.5700e-003	0.0218			177.2252			177.2532
Worker	0.0654	0.0765	0.8987	2.9000e-003	0.2358	1.6800e-003	0.2374	0.0625	1.5600e-003	0.0641			205.2613			205.4444
Total	**0.7198**	**3.1696**	**10.9956**	**0.0127**	**0.4408**	**0.0397**	**0.4804**	**0.1194**	**0.0365**	**0.1560**			**1,117.4077**			**1,117.8140**

3.21 Section 4 - Roadway - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9166	27.6283	20.8010	0.0440		1.2590	1.2590		1.1583	1.1583			4,262.1928			4,291.1409
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.9166**	**27.6283**	**20.8010**	**0.0440**		**1.2590**	**1.2590**		**1.1583**	**1.1583**			**4,262.1928**			**4,291.1409**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0340	0.0398	0.4673	1.5100e-003	0.1226	8.7000e-004	0.1235	0.0325	8.1000e-004	0.0333			106.7359			106.8311
Total	**0.0340**	**0.0398**	**0.4673**	**1.5100e-003**	**0.1226**	**8.7000e-004**	**0.1235**	**0.0325**	**8.1000e-004**	**0.0333**			**106.7359**			**106.8311**

3.21 Section 4 - Roadway - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9166	27.6283	20.8010	0.0440		1.2590	1.2590		1.1583	1.1583			4,262.1928			4,291.1409
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.9166**	**27.6283**	**20.8010**	**0.0440**		**1.2590**	**1.2590**		**1.1583**	**1.1583**			**4,262.1928**			**4,291.1409**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0340	0.0398	0.4673	1.5100e-003	0.1226	8.7000e-004	0.1235	0.0325	8.1000e-004	0.0333			106.7359			106.8311
Total	**0.0340**	**0.0398**	**0.4673**	**1.5100e-003**	**0.1226**	**8.7000e-004**	**0.1235**	**0.0325**	**8.1000e-004**	**0.0333**			**106.7359**			**106.8311**

3.21 Section 4 - Roadway - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6260	23.5524	19.9459	0.0440		1.0740	1.0740		0.9881	0.9881			4,263.7575			4,292.7162
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6260**	**23.5524**	**19.9459**	**0.0440**		**1.0740**	**1.0740**		**0.9881**	**0.9881**			**4,263.7575**			**4,292.7162**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0322	0.0373	0.4387	1.5100e-003	0.1226	8.7000e-004	0.1235	0.0325	8.1000e-004	0.0333			104.9990			105.0898
Total	**0.0322**	**0.0373**	**0.4387**	**1.5100e-003**	**0.1226**	**8.7000e-004**	**0.1235**	**0.0325**	**8.1000e-004**	**0.0333**			**104.9990**			**105.0898**

3.21 Section 4 - Roadway - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6260	23.5524	19.9459	0.0440		1.0740	1.0740		0.9881	0.9881			4,263.7575			4,292.7162
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6260**	**23.5524**	**19.9459**	**0.0440**		**1.0740**	**1.0740**		**0.9881**	**0.9881**			**4,263.7575**			**4,292.7162**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0322	0.0373	0.4387	1.5100e-003	0.1226	8.7000e-004	0.1235	0.0325	8.1000e-004	0.0333			104.9990			105.0898
Total	**0.0322**	**0.0373**	**0.4387**	**1.5100e-003**	**0.1226**	**8.7000e-004**	**0.1235**	**0.0325**	**8.1000e-004**	**0.0333**			**104.9990**			**105.0898**

3.22 Section 5 - Roadway - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6260	23.5524	19.9459	0.0440		1.0740	1.0740		0.9881	0.9881			4,263.7575			4,292.7162
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6260**	**23.5524**	**19.9459**	**0.0440**		**1.0740**	**1.0740**		**0.9881**	**0.9881**			**4,263.7575**			**4,292.7162**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0322	0.0373	0.4387	1.5100e-003	0.1226	8.7000e-004	0.1235	0.0325	8.1000e-004	0.0333			104.9990			105.0898
Total	**0.0322**	**0.0373**	**0.4387**	**1.5100e-003**	**0.1226**	**8.7000e-004**	**0.1235**	**0.0325**	**8.1000e-004**	**0.0333**			**104.9990**			**105.0898**

3.22 Section 5 - Roadway - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6260	23.5524	19.9459	0.0440		1.0740	1.0740		0.9881	0.9881			4,263.7575			4,292.7162
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6260**	**23.5524**	**19.9459**	**0.0440**		**1.0740**	**1.0740**		**0.9881**	**0.9881**			**4,263.7575**			**4,292.7162**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0322	0.0373	0.4387	1.5100e-003	0.1226	8.7000e-004	0.1235	0.0325	8.1000e-004	0.0333			104.9990			105.0898
Total	**0.0322**	**0.0373**	**0.4387**	**1.5100e-003**	**0.1226**	**8.7000e-004**	**0.1235**	**0.0325**	**8.1000e-004**	**0.0333**			**104.9990**			**105.0898**

3.23 Pond A18 Ecotone Phase 1 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2201	0.0000	12.2201	6.6441	0.0000	6.6441			0.0000			0.0000
Off-Road	5.5833	48.1764	40.3208	0.1055		2.0506	2.0506		1.8865	1.8865			10,216.5127			10,285.9015
Total	**5.5833**	**48.1764**	**40.3208**	**0.1055**	**12.2201**	**2.0506**	**14.2706**	**6.6441**	**1.8865**	**8.5306**			**10,216.5127**			**10,285.9015**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7821	3.3304	12.6038	0.0108	0.2076	0.0415	0.2491	0.0570	0.0382	0.0952			1,003.7231			1,003.9983
Vendor	0.0584	0.3566	0.6437	1.8900e-003	0.0532	7.0300e-003	0.0602	0.0152	6.4700e-003	0.0217			177.1028			177.1314
Worker	0.0620	0.0716	0.8436	2.9000e-003	0.2358	1.6800e-003	0.2374	0.0625	1.5500e-003	0.0641			201.9211			202.0957
Total	**0.9025**	**3.7586**	**14.0910**	**0.0156**	**0.4965**	**0.0502**	**0.5467**	**0.1348**	**0.0462**	**0.1810**			**1,382.7470**			**1,383.2254**

3.23 Pond A18 Ecotone Phase 1 - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.4990	0.0000	5.4990	2.9898	0.0000	2.9898			0.0000			0.0000
Off-Road	5.5833	48.1764	40.3208	0.1055		2.0506	2.0506		1.8865	1.8865			10,216.5127			10,285.9015
Total	**5.5833**	**48.1764**	**40.3208**	**0.1055**	**5.4990**	**2.0506**	**7.5496**	**2.9898**	**1.8865**	**4.8764**			**10,216.5127**			**10,285.9015**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7821	3.3304	12.6038	0.0108	0.2076	0.0415	0.2491	0.0570	0.0382	0.0952			1,003.7231			1,003.9983
Vendor	0.0584	0.3566	0.6437	1.8900e-003	0.0532	7.0300e-003	0.0602	0.0152	6.4700e-003	0.0217			177.1028			177.1314
Worker	0.0620	0.0716	0.8436	2.9000e-003	0.2358	1.6800e-003	0.2374	0.0625	1.5500e-003	0.0641			201.9211			202.0957
Total	**0.9025**	**3.7586**	**14.0910**	**0.0156**	**0.4965**	**0.0502**	**0.5467**	**0.1348**	**0.0462**	**0.1810**			**1,382.7470**			**1,383.2254**

3.24 Pond A18 Ecotone Phase 2 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.1387	0.0000	12.1387	6.6322	0.0000	6.6322			0.0000			0.0000
Off-Road	5.5833	48.1764	40.3208	0.1055		2.0506	2.0506		1.8865	1.8865			10,216.5127			10,285.9015
Total	**5.5833**	**48.1764**	**40.3208**	**0.1055**	**12.1387**	**2.0506**	**14.1893**	**6.6322**	**1.8865**	**8.5187**			**10,216.5127**			**10,285.9015**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2629	1.1196	4.2371	3.6400e-003	0.0698	0.0140	0.0837	0.0192	0.0128	0.0320			337.4249			337.5174
Vendor	0.0584	0.3566	0.6437	1.8900e-003	0.0532	7.0300e-003	0.0602	0.0152	6.4700e-003	0.0217			177.1028			177.1314
Worker	0.0620	0.0716	0.8436	2.9000e-003	0.2358	1.6800e-003	0.2374	0.0625	1.5500e-003	0.0641			201.9211			202.0957
Total	**0.3833**	**1.5478**	**5.7243**	**8.4300e-003**	**0.3587**	**0.0227**	**0.3814**	**0.0969**	**0.0209**	**0.1178**			**716.4488**			**716.7445**

3.24 Pond A18 Ecotone Phase 2 - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.4624	0.0000	5.4624	2.9845	0.0000	2.9845			0.0000			0.0000
Off-Road	5.5833	48.1764	40.3208	0.1055		2.0506	2.0506		1.8865	1.8865			10,216.5127			10,285.9015
Total	**5.5833**	**48.1764**	**40.3208**	**0.1055**	**5.4624**	**2.0506**	**7.5130**	**2.9845**	**1.8865**	**4.8710**			**10,216.5127**			**10,285.9015**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2629	1.1196	4.2371	3.6400e-003	0.0698	0.0140	0.0837	0.0192	0.0128	0.0320			337.4249			337.5174
Vendor	0.0584	0.3566	0.6437	1.8900e-003	0.0532	7.0300e-003	0.0602	0.0152	6.4700e-003	0.0217			177.1028			177.1314
Worker	0.0620	0.0716	0.8436	2.9000e-003	0.2358	1.6800e-003	0.2374	0.0625	1.5500e-003	0.0641			201.9211			202.0957
Total	**0.3833**	**1.5478**	**5.7243**	**8.4300e-003**	**0.3587**	**0.0227**	**0.3814**	**0.0969**	**0.0209**	**0.1178**			**716.4488**			**716.7445**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546690	0.063179	0.174273	0.121979	0.033815	0.004830	0.015501	0.025302	0.002100	0.003252	0.006757	0.000658	0.001666

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**			**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**			**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.2000e-004			2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.2000e-004			2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.2000e-004			2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**2.2000e-004**			**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.2000e-004			2.3000e-004
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**2.2000e-004**			**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Shoreline - Alt3 - LPP

San Francisco Bay Area Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	1.00	User Defined Unit	3,000.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project will allow approximately 3,000 acres of former salt pond to be restored

Construction Phase - Estimated construction dates

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using assumed equipment from original AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

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Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Trips and VMT - # workers = pieces of equipment x 1.25
4 miles RT assumed for hauling

Demolition - No Demo

Grading - Section 1 = 4380', Section 2=2120', Section 3=2975', Section 4=5525', Section 5=4775' x 112' width + 30' TCE on each side. Degrade=50' width. Ecotone=480' width

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
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tblConstructionPhase	NumDays	15,500.00	172.00
tblConstructionPhase	NumDays	15,500.00	161.00

tblConstructionPhase	NumDays	15,500.00	131.00
tblConstructionPhase	NumDays	15,500.00	151.00
tblConstructionPhase	NumDays	15,500.00	153.00
tblConstructionPhase	NumDays	15,500.00	32.00
tblConstructionPhase	NumDays	15,500.00	174.00
tblConstructionPhase	NumDays	15,500.00	129.00
tblConstructionPhase	NumDays	15,500.00	65.00
tblConstructionPhase	NumDays	11,000.00	11.00
tblConstructionPhase	NumDays	11,000.00	23.00
tblConstructionPhase	NumDays	11,000.00	15.00
tblConstructionPhase	NumDays	11,000.00	11.00
tblConstructionPhase	NumDays	11,000.00	10.00
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tblConstructionPhase	NumDays	6,000.00	22.00
tblConstructionPhase	NumDays	6,000.00	23.00
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tblConstructionPhase	PhaseEndDate	4/20/2020	10/30/2023
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tblConstructionPhase	PhaseEndDate	9/13/2017	8/15/2017
tblConstructionPhase	PhaseEndDate	4/16/2018	3/31/2018
tblConstructionPhase	PhaseEndDate	6/14/2018	6/29/2018
tblConstructionPhase	PhaseEndDate	9/30/2019	4/15/2019
tblConstructionPhase	PhaseEndDate	11/15/2019	8/30/2019

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tblConstructionPhase	PhaseEndDate	8/30/2019	1/31/2019
tblConstructionPhase	PhaseEndDate	4/17/2018	8/31/2017
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tblConstructionPhase	PhaseStartDate	11/1/2018	8/1/2018
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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	3.7828	41.8761	27.2318	0.0483	2.3841	1.6591	4.0431	1.2582	1.5263	2.7845			4,447.9565			4,475.1470
2018	5.3515	57.5046	39.7119	0.0780	5.0850	2.2172	7.3022	2.6893	2.0398	4.7291			7,064.9564			7,108.6440
2019	4.8690	47.6926	40.0151	0.0735	4.2866	1.8229	6.1095	2.2338	1.6771	3.9109			6,538.0812			6,577.3242
2023	1.1211	6.9167	13.6355	0.0217	1.1254	0.2363	1.3617	0.5473	0.2174	0.7648			1,869.3687			1,879.0047
2024	0.8372	5.6154	7.9152	0.0185	1.0356	0.2087	1.2443	0.5308	0.1920	0.7228			1,601.7416			1,611.4278
Total	**15.9615**	**159.6054**	**128.5096**	**0.2399**	**13.9166**	**6.1442**	**20.0608**	**7.2594**	**5.6526**	**12.9121**			**21,522.1044**			**21,651.5477**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	3.7828	41.8761	27.2318	0.0483	1.1447	1.6591	2.8038	0.5854	1.5263	2.1118			4,447.9515			4,475.1420
2018	5.3515	57.5045	39.7119	0.0780	2.4195	2.2172	4.6367	1.2451	2.0398	3.2849			7,064.9485			7,108.6360
2019	4.8690	47.6926	40.0151	0.0735	2.0747	1.8229	3.8977	1.0447	1.6771	2.7217			6,538.0742			6,577.3172
2023	1.1211	6.9167	13.6355	0.0217	0.5791	0.2363	0.8154	0.2662	0.2174	0.4836			1,869.3671			1,879.0030
2024	0.8372	5.6154	7.9152	0.0185	0.5037	0.2087	0.7124	0.2491	0.1920	0.4411			1,601.7399			1,611.4261
Total	**15.9615**	**159.6052**	**128.5095**	**0.2399**	**6.7217**	**6.1442**	**12.8660**	**3.3904**	**5.6526**	**9.0431**			**21,522.0812**			**21,651.5243**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**51.70**	**0.00**	**35.87**	**53.30**	**0.00**	**29.96**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000			2.0000e-005			2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Waste						0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Water						0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**2.0000e-005**			**2.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000			2.0000e-005			2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Waste						0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Water						0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**2.0000e-005**			**2.0000e-005**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Section 1 - Degrade	Grading	4/1/2017	6/30/2017	5	65	
2	Section 1 - Stripping	Site Preparation	7/1/2017	7/31/2017	5	21	
3	Section 2 - Degrade	Grading	7/1/2017	8/15/2017	5	32	
4	Section 1 - Placement	Grading	8/1/2017	3/31/2018	5	174	
5	Section 2 - Stripping	Site Preparation	8/16/2017	8/31/2017	5	12	
6	Section 2 - Placement	Grading	9/1/2017	2/28/2018	5	129	
7	Section 2 - Roadway	Paving	3/1/2018	3/15/2018	5	11	
8	Section 3 - Degrade	Grading	4/1/2018	6/29/2018	5	65	
9	Section 1 - Roadway	Paving	4/1/2018	4/15/2018	5	10	
10	Section 3 - Stripping	Site Preparation	6/30/2018	7/31/2018	5	22	
11	Section 4 - Degrade	Grading	7/1/2018	10/31/2018	5	88	
12	Section 3 - Placement	Grading	8/1/2018	3/31/2019	5	173	
13	Section 5 - Degrade	Grading	9/1/2018	12/31/2018	5	86	
14	Section 4 - Stripping	Site Preparation	11/1/2018	11/30/2018	5	22	
15	Section 4 - Placement	Grading	12/1/2018	7/30/2019	5	172	
16	Section 5 - Stripping	Site Preparation	1/1/2019	1/31/2019	5	23	
17	Section 5 - Placement	Grading	2/1/2019	9/15/2019	5	161	
18	Section 3 - Roadway	Paving	4/1/2019	4/15/2019	5	11	
19	Pond A12 Ecotone	Grading	4/16/2019	10/15/2019	5	131	
20	Section 4 - Roadway	Paving	7/31/2019	8/30/2019	5	23	
21	Section 5 - Roadway	Paving	9/1/2019	9/20/2019	5	15	
22	Pond A18 Ecotone Phase 1	Grading	4/1/2023	10/30/2023	5	151	
23	Pond A18 Ecotone Phase 2	Grading	4/1/2024	10/30/2024	5	153	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Section 1 - Degrade	Excavators	2	8.00	162	0.38
Section 1 - Degrade	Graders	0	8.00	174	0.41
Section 1 - Degrade	Off-Highway Trucks	12	8.00	400	0.38
Section 1 - Degrade	Rubber Tired Dozers	1	8.00	255	0.40
Section 1 - Degrade	Scrapers	7	8.00	361	0.48
Section 1 - Degrade	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 1 - Stripping	Excavators	1	8.00	162	0.38
Section 1 - Stripping	Off-Highway Trucks	6	8.00	400	0.38
Section 1 - Stripping	Rubber Tired Dozers	1	8.00	255	0.40
Section 1 - Stripping	Scrapers	4	8.00	361	0.48
Section 1 - Stripping	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 2 - Degrade	Excavators	2	8.00	162	0.38
Section 2 - Degrade	Graders	0	8.00	174	0.41
Section 2 - Degrade	Off-Highway Trucks	12	8.00	400	0.38
Section 2 - Degrade	Rubber Tired Dozers	1	8.00	255	0.40
Section 2 - Degrade	Scrapers	7	8.00	361	0.48
Section 2 - Degrade	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 1 - Placement	Excavators	2	8.00	162	0.38
Section 1 - Placement	Graders	1	8.00	174	0.41
Section 1 - Placement	Off-Highway Trucks	14	8.00	400	0.38
Section 1 - Placement	Rollers	1	8.00	80	0.38
Section 1 - Placement	Rubber Tired Dozers	2	8.00	255	0.40
Section 1 - Placement	Scrapers	5	8.00	361	0.48

Section 1 - Placement	Tractors/Loaders/Backhoes		2	8.00	97	0.37
Section 2 - Stripping	Excavators		1	8.00	162	0.38
Section 2 - Stripping	Off-Highway Trucks		6	8.00	400	0.38
Section 2 - Stripping	Rubber Tired Dozers		1	8.00	255	0.40
Section 2 - Stripping	Scrapers		4	8.00	361	0.48
Section 2 - Stripping	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 2 - Placement	Excavators		2	8.00	162	0.38
Section 2 - Placement	Graders		1	8.00	174	0.41
Section 2 - Placement	Off-Highway Trucks		14	8.00	400	0.38
Section 2 - Placement	Rollers		1	8.00	80	0.38
Section 2 - Placement	Rubber Tired Dozers		2	8.00	255	0.40
Section 2 - Placement	Scrapers		5	8.00	361	0.48
Section 2 - Placement	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 2 - Roadway	Graders		1	8.00	174	0.41
Section 2 - Roadway	Off-Highway Trucks		2	8.00	400	0.38
Section 2 - Roadway	Pavers		0	8.00	125	0.42
Section 2 - Roadway	Paving Equipment		0	8.00	130	0.36
Section 2 - Roadway	Rollers		1	8.00	80	0.38
Section 2 - Roadway	Rubber Tired Dozers		1	8.00	255	0.40
Section 3 - Degrade	Excavators		2	8.00	162	0.38
Section 3 - Degrade	Graders		0	8.00	174	0.41
Section 3 - Degrade	Off-Highway Trucks		12	8.00	400	0.38
Section 3 - Degrade	Rubber Tired Dozers		1	8.00	255	0.40
Section 3 - Degrade	Scrapers		7	8.00	361	0.48
Section 3 - Degrade	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 1 - Roadway	Graders		1	8.00	174	0.41
Section 1 - Roadway	Off-Highway Trucks		2	8.00	400	0.38
Section 1 - Roadway	Pavers		0	8.00	125	0.42

Section 1 - Roadway	Paving Equipment	0	8.00	130	0.36
Section 1 - Roadway	Rollers	1	8.00	80	0.38
Section 1 - Roadway	Rubber Tired Dozers	1	8.00	255	0.40
Section 3 - Stripping	Excavators	1	8.00	162	0.38
Section 3 - Stripping	Off-Highway Trucks	6	8.00	400	0.38
Section 3 - Stripping	Rubber Tired Dozers	1	8.00	255	0.40
Section 3 - Stripping	Scrapers	4	8.00	361	0.48
Section 3 - Stripping	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 4 - Degrade	Excavators	2	8.00	162	0.38
Section 4 - Degrade	Graders	0	8.00	174	0.41
Section 4 - Degrade	Off-Highway Trucks	12	8.00	400	0.38
Section 4 - Degrade	Rubber Tired Dozers	1	8.00	255	0.40
Section 4 - Degrade	Scrapers	7	8.00	361	0.48
Section 4 - Degrade	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 3 - Placement	Excavators	2	8.00	162	0.38
Section 3 - Placement	Graders	1	8.00	174	0.41
Section 3 - Placement	Off-Highway Trucks	14	8.00	400	0.38
Section 3 - Placement	Rollers	1	8.00	80	0.38
Section 3 - Placement	Rubber Tired Dozers	2	8.00	255	0.40
Section 3 - Placement	Scrapers	5	8.00	361	0.48
Section 3 - Placement	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 5 - Degrade	Excavators	2	8.00	162	0.38
Section 5 - Degrade	Graders	0	8.00	174	0.41
Section 5 - Degrade	Off-Highway Trucks	12	8.00	400	0.38
Section 5 - Degrade	Rubber Tired Dozers	1	8.00	255	0.40
Section 5 - Degrade	Scrapers	7	8.00	361	0.48
Section 5 - Degrade	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 4 - Stripping	Excavators	1	8.00	162	0.38

Section 4 - Stripping	Off-Highway Trucks		6	8.00	400	0.38
Section 4 - Stripping	Rubber Tired Dozers		1	8.00	255	0.40
Section 4 - Stripping	Scrapers		4	8.00	361	0.48
Section 4 - Stripping	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 4 - Placement	Excavators		2	8.00	162	0.38
Section 4 - Placement	Graders		1	8.00	174	0.41
Section 4 - Placement	Off-Highway Trucks		14	8.00	400	0.38
Section 4 - Placement	Rollers		1	8.00	80	0.38
Section 4 - Placement	Rubber Tired Dozers		2	8.00	255	0.40
Section 4 - Placement	Scrapers		5	8.00	361	0.48
Section 4 - Placement	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 5 - Stripping	Excavators		1	8.00	162	0.38
Section 5 - Stripping	Off-Highway Trucks		6	8.00	400	0.38
Section 5 - Stripping	Rubber Tired Dozers		1	8.00	255	0.40
Section 5 - Stripping	Scrapers		4	8.00	361	0.48
Section 5 - Stripping	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 5 - Placement	Excavators		2	8.00	162	0.38
Section 5 - Placement	Graders		1	8.00	174	0.41
Section 5 - Placement	Off-Highway Trucks		14	8.00	400	0.38
Section 5 - Placement	Rollers		1	8.00	80	0.38
Section 5 - Placement	Rubber Tired Dozers		2	8.00	255	0.40
Section 5 - Placement	Scrapers		5	8.00	361	0.48
Section 5 - Placement	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 3 - Roadway	Graders		1	8.00	174	0.41
Section 3 - Roadway	Off-Highway Trucks		2	8.00	400	0.38
Section 3 - Roadway	Pavers		0	8.00	125	0.42
Section 3 - Roadway	Paving Equipment		0	8.00	130	0.36
Section 3 - Roadway	Rollers		1	8.00	80	0.38

Section 3 - Roadway	Rubber Tired Dozers		1	8.00	255	0.40
Pond A12 Ecotone	Excavators		0	8.00	162	0.38
Pond A12 Ecotone	Graders		1	8.00	174	0.41
Pond A12 Ecotone	Off-Highway Trucks		6	8.00	400	0.38
Pond A12 Ecotone	Rollers		1	8.00	80	0.38
Pond A12 Ecotone	Rubber Tired Dozers		2	8.00	255	0.40
Pond A12 Ecotone	Scrapers		0	8.00	361	0.48
Pond A12 Ecotone	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 4 - Roadway	Graders		1	8.00	174	0.41
Section 4 - Roadway	Off-Highway Trucks		2	8.00	400	0.38
Section 4 - Roadway	Pavers		0	8.00	125	0.42
Section 4 - Roadway	Paving Equipment		0	8.00	130	0.36
Section 4 - Roadway	Rollers		1	8.00	80	0.38
Section 4 - Roadway	Rubber Tired Dozers		1	8.00	255	0.40
Section 5 - Roadway	Graders		1	8.00	174	0.41
Section 5 - Roadway	Off-Highway Trucks		2	8.00	400	0.38
Section 5 - Roadway	Pavers		0	8.00	125	0.42
Section 5 - Roadway	Paving Equipment		0	8.00	130	0.36
Section 5 - Roadway	Rollers		1	8.00	80	0.38
Section 5 - Roadway	Rubber Tired Dozers		1	8.00	255	0.40
Pond A18 Ecotone Phase 1	Excavators		0	8.00	162	0.38
Pond A18 Ecotone Phase 1	Graders		1	8.00	174	0.41
Pond A18 Ecotone Phase 1	Off-Highway Trucks		14	8.00	400	0.38
Pond A18 Ecotone Phase 1	Rollers		1	8.00	80	0.38
Pond A18 Ecotone Phase 1	Rubber Tired Dozers		2	8.00	255	0.40
Pond A18 Ecotone Phase 1	Scrapers		0	8.00	361	0.48
Pond A18 Ecotone Phase 1	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Pond A18 Ecotone Phase 2	Excavators		0	8.00	162	0.38

Pond A18 Ecotone Phase 2	Graders	1	8.00	174	0.41
Pond A18 Ecotone Phase 2	Off-Highway Trucks	14	8.00	400	0.38
Pond A18 Ecotone Phase 2	Rollers	1	8.00	80	0.38
Pond A18 Ecotone Phase 2	Rubber Tired Dozers	2	8.00	255	0.40
Pond A18 Ecotone Phase 2	Scrapers	0	8.00	361	0.48
Pond A18 Ecotone Phase 2	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Section 1 - Degrade	22	55.00	0.00	9,624.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 1 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 2 - Degrade	22	55.00	0.00	5,027.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 1 - Placement	27	68.00	8.00	22,866.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 2 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 2 - Placement	25	63.00	8.00	11,200.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 2 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Section 3 - Degrade	22	55.00	0.00	7,614.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 1 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Section 3 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 4 - Degrade	22	55.00	0.00	17,194.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 3 - Placement	25	63.00	8.00	19,654.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 5 - Degrade	22	55.00	0.00	15,702.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 4 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 4 - Placement	25	63.00	8.00	33,871.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 5 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 5 - Placement	25	63.00	8.00	20,151.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 3 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond A12 Ecotone	10	25.00	8.00	75,842.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 4 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Section 5 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond A18 Ecotone Phase 1	18	45.00	8.00	114,275.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Pond A18 Ecotone Phase 2	18	45.00	8.00	39,208.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Section 1 - Degrade - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2027	0.0000	0.2027	0.1085	0.0000	0.1085			0.0000			0.0000
Off-Road	0.6979	8.2377	4.6928	9.1500e-003		0.3241	0.3241		0.2982	0.2982			848.7461			854.2072
Total	**0.6979**	**8.2377**	**4.6928**	**9.1500e-003**	**0.2027**	**0.3241**	**0.5269**	**0.1085**	**0.2982**	**0.4067**			**848.7461**			**854.2072**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0577	0.2223	0.9005	4.5000e-004	8.2000e-003	1.8800e-003	0.0101	2.2600e-003	1.7200e-003	3.9800e-003			39.2565			39.2660
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	6.0100e-003	8.7900e-003	0.0846	1.9000e-004	0.0162	1.3000e-004	0.0163	4.3100e-003	1.2000e-004	4.4300e-003			14.1542			14.1698
Total	**0.0637**	**0.2311**	**0.9852**	**6.4000e-004**	**0.0244**	**2.0100e-003**	**0.0264**	**6.5700e-003**	**1.8400e-003**	**8.4100e-003**			**53.4107**			**53.4357**

3.2 Section 1 - Degrade - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0912	0.0000	0.0912	0.0488	0.0000	0.0488			0.0000			0.0000
Off-Road	0.6979	8.2377	4.6928	9.1500e-003		0.3241	0.3241		0.2982	0.2982			848.7451			854.2062
Total	**0.6979**	**8.2377**	**4.6928**	**9.1500e-003**	**0.0912**	**0.3241**	**0.4154**	**0.0488**	**0.2982**	**0.3470**			**848.7451**			**854.2062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0577	0.2223	0.9005	4.5000e-004	8.2000e-003	1.8800e-003	0.0101	2.2600e-003	1.7200e-003	3.9800e-003			39.2565			39.2660
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	6.0100e-003	8.7900e-003	0.0846	1.9000e-004	0.0162	1.3000e-004	0.0163	4.3100e-003	1.2000e-004	4.4300e-003			14.1542			14.1698
Total	**0.0637**	**0.2311**	**0.9852**	**6.4000e-004**	**0.0244**	**2.0100e-003**	**0.0264**	**6.5700e-003**	**1.8400e-003**	**8.4100e-003**			**53.4107**			**53.4357**

3.3 Section 1 - Stripping - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0632	0.0000	0.0632	0.0348	0.0000	0.0348			0.0000			0.0000
Off-Road	0.1258	1.4856	0.8638	1.6000e-003		0.0590	0.0590		0.0543	0.0543			148.6946			149.6513
Total	**0.1258**	**1.4856**	**0.8638**	**1.6000e-003**	**0.0632**	**0.0590**	**0.1222**	**0.0348**	**0.0543**	**0.0891**			**148.6946**			**149.6513**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	1.0600e-003	1.5500e-003	0.0149	3.0000e-005	2.8600e-003	2.0000e-005	2.8800e-003	7.6000e-004	2.0000e-005	7.8000e-004			2.4943			2.4971
Total	**1.0600e-003**	**1.5500e-003**	**0.0149**	**3.0000e-005**	**2.8600e-003**	**2.0000e-005**	**2.8800e-003**	**7.6000e-004**	**2.0000e-005**	**7.8000e-004**			**2.4943**			**2.4971**

3.3 Section 1 - Stripping - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0285	0.0000	0.0285	0.0156	0.0000	0.0156			0.0000			0.0000
Off-Road	0.1258	1.4856	0.8638	1.6000e-003		0.0590	0.0590		0.0543	0.0543			148.6944			149.6511
Total	**0.1258**	**1.4856**	**0.8638**	**1.6000e-003**	**0.0285**	**0.0590**	**0.0875**	**0.0156**	**0.0543**	**0.0699**			**148.6944**			**149.6511**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	1.0600e-003	1.5500e-003	0.0149	3.0000e-005	2.8600e-003	2.0000e-005	2.8800e-003	7.6000e-004	2.0000e-005	7.8000e-004			2.4943			2.4971
Total	**1.0600e-003**	**1.5500e-003**	**0.0149**	**3.0000e-005**	**2.8600e-003**	**2.0000e-005**	**2.8800e-003**	**7.6000e-004**	**2.0000e-005**	**7.8000e-004**			**2.4943**			**2.4971**

3.4 Section 2 - Degrade - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0999	0.0000	0.0999	0.0535	0.0000	0.0535			0.0000			0.0000
Off-Road	0.3436	4.0555	2.3103	4.5000e-003		0.1596	0.1596		0.1468	0.1468			417.8442			420.5328
Total	**0.3436**	**4.0555**	**2.3103**	**4.5000e-003**	**0.0999**	**0.1596**	**0.2595**	**0.0535**	**0.1468**	**0.2003**			**417.8442**			**420.5328**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0301	0.1161	0.4704	2.3000e-004	4.2800e-003	9.8000e-004	5.2600e-003	1.1800e-003	9.0000e-004	2.0800e-003			20.5052			20.5102
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	2.9600e-003	4.3300e-003	0.0417	9.0000e-005	7.9800e-003	6.0000e-005	8.0500e-003	2.1200e-003	6.0000e-005	2.1800e-003			6.9682			6.9759
Total	**0.0331**	**0.1204**	**0.5121**	**3.2000e-004**	**0.0123**	**1.0400e-003**	**0.0133**	**3.3000e-003**	**9.6000e-004**	**4.2600e-003**			**27.4735**			**27.4861**

3.4 Section 2 - Degrade - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0450	0.0000	0.0450	0.0241	0.0000	0.0241			0.0000			0.0000
Off-Road	0.3436	4.0555	2.3103	4.5000e-003		0.1596	0.1596		0.1468	0.1468			417.8437			420.5323
Total	**0.3436**	**4.0555**	**2.3103**	**4.5000e-003**	**0.0450**	**0.1596**	**0.2045**	**0.0241**	**0.1468**	**0.1709**			**417.8437**			**420.5323**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0301	0.1161	0.4704	2.3000e-004	4.2800e-003	9.8000e-004	5.2600e-003	1.1800e-003	9.0000e-004	2.0800e-003			20.5052			20.5102
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	2.9600e-003	4.3300e-003	0.0417	9.0000e-005	7.9800e-003	6.0000e-005	8.0500e-003	2.1200e-003	6.0000e-005	2.1800e-003			6.9682			6.9759
Total	**0.0331**	**0.1204**	**0.5121**	**3.2000e-004**	**0.0123**	**1.0400e-003**	**0.0133**	**3.3000e-003**	**9.6000e-004**	**4.2600e-003**			**27.4735**			**27.4861**

3.5 Section 1 - Placement - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0658	0.0000	1.0658	0.5784	0.0000	0.5784			0.0000			0.0000
Off-Road	1.2920	14.8415	8.4435	0.0165		0.6113	0.6113		0.5624	0.5624			1,526.8186			1,536.6427
Total	**1.2920**	**14.8415**	**8.4435**	**0.0165**	**1.0658**	**0.6113**	**1.6770**	**0.5784**	**0.5624**	**1.1407**			**1,526.8186**			**1,536.6427**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0859	0.3308	1.3403	6.7000e-004	0.0176	2.8000e-003	0.0204	4.6900e-003	2.5700e-003	7.2600e-003			58.4283			58.4424
Vendor	5.0300e-003	0.0392	0.0606	1.0000e-004	2.8100e-003	5.6000e-004	3.3700e-003	8.0000e-004	5.2000e-004	1.3200e-003			9.2698			9.2713
Worker	0.0125	0.0182	0.1755	4.0000e-004	0.0336	2.7000e-004	0.0339	8.9400e-003	2.5000e-004	9.1900e-003			29.3458			29.3780
Total	**0.1034**	**0.3882**	**1.5764**	**1.1700e-003**	**0.0540**	**3.6300e-003**	**0.0577**	**0.0144**	**3.3400e-003**	**0.0178**			**97.0438**			**97.0917**

3.5 Section 1 - Placement - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4796	0.0000	0.4796	0.2603	0.0000	0.2603			0.0000			0.0000
Off-Road	1.2920	14.8415	8.4435	0.0165		0.6113	0.6113		0.5624	0.5624			1,526.816 8			1,536.640 9
Total	**1.2920**	**14.8415**	**8.4435**	**0.0165**	**0.4796**	**0.6113**	**1.0909**	**0.2603**	**0.5624**	**0.8226**			**1,526.816 8**			**1,536.640 9**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0859	0.3308	1.3403	6.7000e-004	0.0176	2.8000e-003	0.0204	4.6900e-003	2.5700e-003	7.2600e-003			58.4283			58.4424
Vendor	5.0300e-003	0.0392	0.0606	1.0000e-004	2.8100e-003	5.6000e-004	3.3700e-003	8.0000e-004	5.2000e-004	1.3200e-003			9.2698			9.2713
Worker	0.0125	0.0182	0.1755	4.0000e-004	0.0336	2.7000e-004	0.0339	8.9400e-003	2.5000e-004	9.1900e-003			29.3458			29.3780
Total	**0.1034**	**0.3882**	**1.5764**	**1.1700e-003**	**0.0540**	**3.6300e-003**	**0.0577**	**0.0144**	**3.3400e-003**	**0.0178**			**97.0438**			**97.0917**

3.5 Section 1 - Placement - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0658	0.0000	1.0658	0.5784	0.0000	0.5784			0.0000			0.0000
Off-Road	0.6754	7.5261	4.4741	9.8200e-003		0.3050	0.3050		0.2806	0.2806			896.1381			901.9967
Total	**0.6754**	**7.5261**	**4.4741**	**9.8200e-003**	**1.0658**	**0.3050**	**1.3707**	**0.5784**	**0.2806**	**0.8589**			**896.1381**			**901.9967**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0436	0.1833	0.7446	4.0000e-004	0.0163	1.6300e-003	0.0180	4.2300e-003	1.5000e-003	5.7300e-003			34.1995			34.2080
Vendor	2.6600e-003	0.0212	0.0337	6.0000e-005	1.6700e-003	3.1000e-004	1.9800e-003	4.8000e-004	2.9000e-004	7.7000e-004			5.4307			5.4316
Worker	6.6300e-003	9.7900e-003	0.0936	2.4000e-004	0.0201	1.5000e-004	0.0202	5.3300e-003	1.4000e-004	5.4800e-003			16.8506			16.8683
Total	**0.0528**	**0.2142**	**0.8718**	**7.0000e-004**	**0.0381**	**2.0900e-003**	**0.0401**	**0.0100**	**1.9300e-003**	**0.0120**			**56.4808**			**56.5079**

3.5 Section 1 - Placement - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4796	0.0000	0.4796	0.2603	0.0000	0.2603			0.0000			0.0000
Off-Road	0.6754	7.5261	4.4741	9.8200e-003		0.3050	0.3050		0.2806	0.2806			896.1371			901.9956
Total	**0.6754**	**7.5261**	**4.4741**	**9.8200e-003**	**0.4796**	**0.3050**	**0.7845**	**0.2603**	**0.2806**	**0.5408**			**896.1371**			**901.9956**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0436	0.1833	0.7446	4.0000e-004	0.0163	1.6300e-003	0.0180	4.2300e-003	1.5000e-003	5.7300e-003			34.1995			34.2080
Vendor	2.6600e-003	0.0212	0.0337	6.0000e-005	1.6700e-003	3.1000e-004	1.9800e-003	4.8000e-004	2.9000e-004	7.7000e-004			5.4307			5.4316
Worker	6.6300e-003	9.7900e-003	0.0936	2.4000e-004	0.0201	1.5000e-004	0.0202	5.3300e-003	1.4000e-004	5.4800e-003			16.8506			16.8683
Total	**0.0528**	**0.2142**	**0.8718**	**7.0000e-004**	**0.0381**	**2.0900e-003**	**0.0401**	**0.0100**	**1.9300e-003**	**0.0120**			**56.4808**			**56.5079**

3.6 Section 2 - Stripping - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0361	0.0000	0.0361	0.0199	0.0000	0.0199			0.0000			0.0000
Off-Road	0.0719	0.8489	0.4936	9.2000e-004		0.0337	0.0337		0.0310	0.0310			84.9683			85.5150
Total	**0.0719**	**0.8489**	**0.4936**	**9.2000e-004**	**0.0361**	**0.0337**	**0.0699**	**0.0199**	**0.0310**	**0.0509**			**84.9683**			**85.5150**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	6.1000e-004	8.9000e-004	8.5200e-003	2.0000e-005	1.6300e-003	1.0000e-005	1.6500e-003	4.3000e-004	1.0000e-005	4.5000e-004			1.4253			1.4269
Total	**6.1000e-004**	**8.9000e-004**	**8.5200e-003**	**2.0000e-005**	**1.6300e-003**	**1.0000e-005**	**1.6500e-003**	**4.3000e-004**	**1.0000e-005**	**4.5000e-004**			**1.4253**			**1.4269**

3.6 Section 2 - Stripping - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0163	0.0000	0.0163	8.9400e-003	0.0000	8.9400e-003			0.0000			0.0000
Off-Road	0.0719	0.8489	0.4936	9.2000e-004		0.0337	0.0337		0.0310	0.0310			84.9682			85.5149
Total	**0.0719**	**0.8489**	**0.4936**	**9.2000e-004**	**0.0163**	**0.0337**	**0.0500**	**8.9400e-003**	**0.0310**	**0.0400**			**84.9682**			**85.5149**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	6.1000e-004	8.9000e-004	8.5200e-003	2.0000e-005	1.6300e-003	1.0000e-005	1.6500e-003	4.3000e-004	1.0000e-005	4.5000e-004			1.4253			1.4269
Total	**6.1000e-004**	**8.9000e-004**	**8.5200e-003**	**2.0000e-005**	**1.6300e-003**	**1.0000e-005**	**1.6500e-003**	**4.3000e-004**	**1.0000e-005**	**4.5000e-004**			**1.4253**			**1.4269**

3.7 Section 2 - Placement - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7856	0.0000	0.7856	0.4282	0.0000	0.4282			0.0000			0.0000
Off-Road	0.9921	11.4481	6.4560	0.0127		0.4626	0.4626		0.4256	0.4256			1,179.8155			1,187.4069
Total	**0.9921**	**11.4481**	**6.4560**	**0.0127**	**0.7856**	**0.4626**	**1.2482**	**0.4282**	**0.4256**	**0.8538**			**1,179.8155**			**1,187.4069**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0448	0.1725	0.6987	3.5000e-004	8.7200e-003	1.4600e-003	0.0102	2.3300e-003	1.3400e-003	3.6700e-003			30.4567			30.4640
Vendor	3.9700e-003	0.0309	0.0478	8.0000e-005	2.2100e-003	4.4000e-004	2.6600e-003	6.4000e-004	4.1000e-004	1.0400e-003			7.3138			7.3150
Worker	9.1100e-003	0.0133	0.1283	2.9000e-004	0.0246	2.0000e-004	0.0248	6.5400e-003	1.8000e-004	6.7200e-003			21.4511			21.4746
Total	**0.0578**	**0.2167**	**0.8748**	**7.2000e-004**	**0.0355**	**2.1000e-003**	**0.0376**	**9.5100e-003**	**1.9300e-003**	**0.0114**			**59.2215**			**59.2536**

3.7 Section 2 - Placement - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3535	0.0000	0.3535	0.1927	0.0000	0.1927			0.0000			0.0000
Off-Road	0.9921	11.4481	6.4560	0.0127		0.4626	0.4626		0.4256	0.4256			1,179.8141			1,187.4055
Total	**0.9921**	**11.4481**	**6.4560**	**0.0127**	**0.3535**	**0.4626**	**0.8161**	**0.1927**	**0.4256**	**0.6183**			**1,179.8141**			**1,187.4055**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0448	0.1725	0.6987	3.5000e-004	8.7200e-003	1.4600e-003	0.0102	2.3300e-003	1.3400e-003	3.6700e-003			30.4567			30.4640
Vendor	3.9700e-003	0.0309	0.0478	8.0000e-005	2.2100e-003	4.4000e-004	2.6600e-003	6.4000e-004	4.1000e-004	1.0400e-003			7.3138			7.3150
Worker	9.1100e-003	0.0133	0.1283	2.9000e-004	0.0246	2.0000e-004	0.0248	6.5400e-003	1.8000e-004	6.7200e-003			21.4511			21.4746
Total	**0.0578**	**0.2167**	**0.8748**	**7.2000e-004**	**0.0355**	**2.1000e-003**	**0.0376**	**9.5100e-003**	**1.9300e-003**	**0.0114**			**59.2215**			**59.2536**

3.7 Section 2 - Placement - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7856	0.0000	0.7856	0.4282	0.0000	0.4282			0.0000			0.0000
Off-Road	0.4353	4.8657	2.8593	6.3600e-003		0.1937	0.1937		0.1782	0.1782			580.6288			584.4247
Total	**0.4353**	**4.8657**	**2.8593**	**6.3600e-003**	**0.7856**	**0.1937**	**0.9793**	**0.4282**	**0.1782**	**0.6064**			**580.6288**			**584.4247**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0190	0.0801	0.3254	1.7000e-004	7.9000e-003	7.1000e-004	8.6100e-003	2.0400e-003	6.6000e-004	2.6900e-003			14.9473			14.9510
Vendor	1.7600e-003	0.0140	0.0223	4.0000e-005	1.1100e-003	2.1000e-004	1.3100e-003	3.2000e-004	1.9000e-004	5.1000e-004			3.5926			3.5932
Worker	4.0600e-003	6.0000e-003	0.0573	1.5000e-004	0.0123	9.0000e-005	0.0124	3.2700e-003	9.0000e-005	3.3600e-003			10.3277			10.3385
Total	**0.0249**	**0.1001**	**0.4050**	**3.6000e-004**	**0.0213**	**1.0100e-003**	**0.0223**	**5.6300e-003**	**9.4000e-004**	**6.5600e-003**			**28.8676**			**28.8827**

3.7 Section 2 - Placement - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3535	0.0000	0.3535	0.1927	0.0000	0.1927			0.0000			0.0000
Off-Road	0.4353	4.8657	2.8593	6.3600e-003		0.1937	0.1937		0.1782	0.1782			580.6281			584.4240
Total	**0.4353**	**4.8657**	**2.8593**	**6.3600e-003**	**0.3535**	**0.1937**	**0.5472**	**0.1927**	**0.1782**	**0.3709**			**580.6281**			**584.4240**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0190	0.0801	0.3254	1.7000e-004	7.9000e-003	7.1000e-004	8.6100e-003	2.0400e-003	6.6000e-004	2.6900e-003			14.9473			14.9510
Vendor	1.7600e-003	0.0140	0.0223	4.0000e-005	1.1100e-003	2.1000e-004	1.3100e-003	3.2000e-004	1.9000e-004	5.1000e-004			3.5926			3.5932
Worker	4.0600e-003	6.0000e-003	0.0573	1.5000e-004	0.0123	9.0000e-005	0.0124	3.2700e-003	9.0000e-005	3.3600e-003			10.3277			10.3385
Total	**0.0249**	**0.1001**	**0.4050**	**3.6000e-004**	**0.0213**	**1.0100e-003**	**0.0223**	**5.6300e-003**	**9.4000e-004**	**6.5600e-003**			**28.8676**			**28.8827**

3.8 Section 2 - Roadway - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0204	0.2149	0.1316	2.4000e-004		9.8100e-003	9.8100e-003		9.0200e-003	9.0200e-003			22.1133			22.2578
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0204**	**0.2149**	**0.1316**	**2.4000e-004**		**9.8100e-003**	**9.8100e-003**		**9.0200e-003**	**9.0200e-003**			**22.1133**			**22.2578**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	2.1000e-004	3.2000e-004	3.0300e-003	1.0000e-005	6.5000e-004	0.0000	6.5000e-004	1.7000e-004	0.0000	1.8000e-004			0.5452			0.5457
Total	**2.1000e-004**	**3.2000e-004**	**3.0300e-003**	**1.0000e-005**	**6.5000e-004**	**0.0000**	**6.5000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**			**0.5452**			**0.5457**

3.8 Section 2 - Roadway - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0204	0.2149	0.1316	2.4000e-004		9.8100e-003	9.8100e-003		9.0200e-003	9.0200e-003			22.1132			22.2578
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0204**	**0.2149**	**0.1316**	**2.4000e-004**		**9.8100e-003**	**9.8100e-003**		**9.0200e-003**	**9.0200e-003**			**22.1132**			**22.2578**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	2.1000e-004	3.2000e-004	3.0300e-003	1.0000e-005	6.5000e-004	0.0000	6.5000e-004	1.7000e-004	0.0000	1.8000e-004			0.5452			0.5457
Total	**2.1000e-004**	**3.2000e-004**	**3.0300e-003**	**1.0000e-005**	**6.5000e-004**	**0.0000**	**6.5000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**			**0.5452**			**0.5457**

3.9 Section 3 - Degrade - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2010	0.0000	0.2010	0.1083	0.0000	0.1083			0.0000			0.0000
Off-Road	0.6110	6.9929	4.1064	9.1500e-003		0.2706	0.2706		0.2490	0.2490			835.4683			840.9303
Total	**0.6110**	**6.9929**	**4.1064**	**9.1500e-003**	**0.2010**	**0.2706**	**0.4716**	**0.1083**	**0.2490**	**0.3573**			**835.4683**			**840.9303**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0388	0.1634	0.6637	3.5000e-004	6.4800e-003	1.4600e-003	7.9400e-003	1.7900e-003	1.3400e-003	3.1300e-003			30.4844			30.4921
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	5.3600e-003	7.9200e-003	0.0757	1.9000e-004	0.0162	1.2000e-004	0.0163	4.3100e-003	1.2000e-004	4.4300e-003			13.6292			13.6435
Total	**0.0442**	**0.1713**	**0.7394**	**5.4000e-004**	**0.0227**	**1.5800e-003**	**0.0243**	**6.1000e-003**	**1.4600e-003**	**7.5600e-003**			**44.1136**			**44.1355**

3.9 Section 3 - Degrade - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0904	0.0000	0.0904	0.0487	0.0000	0.0487			0.0000			0.0000
Off-Road	0.6110	6.9929	4.1064	9.1500e-003		0.2706	0.2706		0.2490	0.2490			835.4674			840.9293
Total	**0.6110**	**6.9929**	**4.1064**	**9.1500e-003**	**0.0904**	**0.2706**	**0.3611**	**0.0487**	**0.2490**	**0.2977**			**835.4674**			**840.9293**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0388	0.1634	0.6637	3.5000e-004	6.4800e-003	1.4600e-003	7.9400e-003	1.7900e-003	1.3400e-003	3.1300e-003			30.4844			30.4921
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	5.3600e-003	7.9200e-003	0.0757	1.9000e-004	0.0162	1.2000e-004	0.0163	4.3100e-003	1.2000e-004	4.4300e-003			13.6292			13.6435
Total	**0.0442**	**0.1713**	**0.7394**	**5.4000e-004**	**0.0227**	**1.5800e-003**	**0.0243**	**6.1000e-003**	**1.4600e-003**	**7.5600e-003**			**44.1136**			**44.1355**

3.10 Section 1 - Roadway - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0185	0.1953	0.1196	2.2000e-004		8.9200e-003	8.9200e-003		8.2000e-003	8.2000e-003			20.1030			20.2344
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0185**	**0.1953**	**0.1196**	**2.2000e-004**		**8.9200e-003**	**8.9200e-003**		**8.2000e-003**	**8.2000e-003**			**20.1030**			**20.2344**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	2.0000e-004	2.9000e-004	2.7500e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004			0.4956			0.4961
Total	**2.0000e-004**	**2.9000e-004**	**2.7500e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**			**0.4956**			**0.4961**

3.10 Section 1 - Roadway - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0185	0.1953	0.1196	2.2000e-004		8.9200e-003	8.9200e-003		8.2000e-003	8.2000e-003			20.1029			20.2344
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0185**	**0.1953**	**0.1196**	**2.2000e-004**		**8.9200e-003**	**8.9200e-003**		**8.2000e-003**	**8.2000e-003**			**20.1029**			**20.2344**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	2.0000e-004	2.9000e-004	2.7500e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004			0.4956			0.4961
Total	**2.0000e-004**	**2.9000e-004**	**2.7500e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**			**0.4956**			**0.4961**

3.11 Section 3 - Stripping - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0662	0.0000	0.0662	0.0364	0.0000	0.0364			0.0000			0.0000
Off-Road	0.1155	1.3245	0.7918	1.6800e-003		0.0518	0.0518		0.0477	0.0477			153.3423			154.3448
Total	**0.1155**	**1.3245**	**0.7918**	**1.6800e-003**	**0.0662**	**0.0518**	**0.1180**	**0.0364**	**0.0477**	**0.0841**			**153.3423**			**154.3448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	9.9000e-004	1.4600e-003	0.0140	4.0000e-005	2.9900e-003	2.0000e-005	3.0200e-003	8.0000e-004	2.0000e-005	8.2000e-004			2.5162			2.5188
Total	**9.9000e-004**	**1.4600e-003**	**0.0140**	**4.0000e-005**	**2.9900e-003**	**2.0000e-005**	**3.0200e-003**	**8.0000e-004**	**2.0000e-005**	**8.2000e-004**			**2.5162**			**2.5188**

3.11 Section 3 - Stripping - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0298	0.0000	0.0298	0.0164	0.0000	0.0164			0.0000			0.0000
Off-Road	0.1155	1.3245	0.7918	1.6800e-003		0.0518	0.0518		0.0477	0.0477			153.3421			154.3446
Total	**0.1155**	**1.3245**	**0.7918**	**1.6800e-003**	**0.0298**	**0.0518**	**0.0816**	**0.0164**	**0.0477**	**0.0640**			**153.3421**			**154.3446**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	9.9000e-004	1.4600e-003	0.0140	4.0000e-005	2.9900e-003	2.0000e-005	3.0200e-003	8.0000e-004	2.0000e-005	8.2000e-004			2.5162			2.5188
Total	**9.9000e-004**	**1.4600e-003**	**0.0140**	**4.0000e-005**	**2.9900e-003**	**2.0000e-005**	**3.0200e-003**	**8.0000e-004**	**2.0000e-005**	**8.2000e-004**			**2.5162**			**2.5188**

3.12 Section 4 - Degrade - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2761	0.0000	0.2761	0.1472	0.0000	0.1472			0.0000			0.0000
Off-Road	0.8272	9.4673	5.5594	0.0124		0.3664	0.3664		0.3371	0.3371			1,131.095 6			1,138.490 2
Total	**0.8272**	**9.4673**	**5.5594**	**0.0124**	**0.2761**	**0.3664**	**0.6425**	**0.1472**	**0.3371**	**0.4843**			**1,131.095 6**			**1,138.490 2**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0877	0.3689	1.4988	8.0000e-004	0.0146	3.2900e-003	0.0179	4.0400e-003	3.0200e-003	7.0600e-003			68.8402			68.8574
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	7.2600e-003	0.0107	0.1025	2.6000e-004	0.0220	1.7000e-004	0.0221	5.8400e-003	1.6000e-004	6.0000e-003			18.4518			18.4711
Total	**0.0949**	**0.3796**	**1.6012**	**1.0600e-003**	**0.0366**	**3.4600e-003**	**0.0401**	**9.8800e-003**	**3.1800e-003**	**0.0131**			**87.2920**			**87.3286**

3.12 Section 4 - Degrade - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1243	0.0000	0.1243	0.0662	0.0000	0.0662			0.0000			0.0000
Off-Road	0.8272	9.4673	5.5594	0.0124		0.3664	0.3664		0.3371	0.3371			1,131.094 3			1,138.488 9
Total	**0.8272**	**9.4673**	**5.5594**	**0.0124**	**0.1243**	**0.3664**	**0.4906**	**0.0662**	**0.3371**	**0.4033**			**1,131.094 3**			**1,138.488 9**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0877	0.3689	1.4988	8.0000e-004	0.0146	3.2900e-003	0.0179	4.0400e-003	3.0200e-003	7.0600e-003			68.8402			68.8574
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	7.2600e-003	0.0107	0.1025	2.6000e-004	0.0220	1.7000e-004	0.0221	5.8400e-003	1.6000e-004	6.0000e-003			18.4518			18.4711
Total	**0.0949**	**0.3796**	**1.6012**	**1.0600e-003**	**0.0366**	**3.4600e-003**	**0.0401**	**9.8800e-003**	**3.1800e-003**	**0.0131**			**87.2920**			**87.3286**

3.13 Section 3 - Placement - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0559	0.0000	1.0559	0.5746	0.0000	0.5746			0.0000			0.0000
Off-Road	1.1035	12.3341	7.2480	0.0161		0.4911	0.4911		0.4518	0.4518			1,471.8264			1,481.4486
Total	**1.1035**	**12.3341**	**7.2480**	**0.0161**	**1.0559**	**0.4911**	**1.5469**	**0.5746**	**0.4518**	**1.0264**			**1,471.8264**			**1,481.4486**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0631	0.2657	1.0794	5.8000e-004	0.0151	2.3700e-003	0.0175	4.0400e-003	2.1800e-003	6.2100e-003			49.5789			49.5913
Vendor	4.4600e-003	0.0355	0.0564	1.0000e-004	2.8100e-003	5.2000e-004	3.3300e-003	8.0000e-004	4.8000e-004	1.2800e-003			9.1069			9.1084
Worker	0.0103	0.0152	0.1454	3.7000e-004	0.0312	2.4000e-004	0.0314	8.2800e-003	2.2000e-004	8.5100e-003			26.1794			26.2069
Total	**0.0779**	**0.3164**	**1.2812**	**1.0500e-003**	**0.0491**	**3.1300e-003**	**0.0522**	**0.0131**	**2.8800e-003**	**0.0160**			**84.8652**			**84.9065**

3.13 Section 3 - Placement - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4751	0.0000	0.4751	0.2586	0.0000	0.2586			0.0000			0.0000
Off-Road	1.1035	12.3341	7.2480	0.0161		0.4911	0.4911		0.4518	0.4518			1,471.8247			1,481.4469
Total	**1.1035**	**12.3341**	**7.2480**	**0.0161**	**0.4751**	**0.4911**	**0.9662**	**0.2586**	**0.4518**	**0.7103**			**1,471.8247**			**1,481.4469**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0631	0.2657	1.0794	5.8000e-004	0.0151	2.3700e-003	0.0175	4.0400e-003	2.1800e-003	6.2100e-003			49.5789			49.5913
Vendor	4.4600e-003	0.0355	0.0564	1.0000e-004	2.8100e-003	5.2000e-004	3.3300e-003	8.0000e-004	4.8000e-004	1.2800e-003			9.1069			9.1084
Worker	0.0103	0.0152	0.1454	3.7000e-004	0.0312	2.4000e-004	0.0314	8.2800e-003	2.2000e-004	8.5100e-003			26.1794			26.2069
Total	**0.0779**	**0.3164**	**1.2812**	**1.0500e-003**	**0.0491**	**3.1300e-003**	**0.0522**	**0.0131**	**2.8800e-003**	**0.0160**			**84.8652**			**84.9065**

3.13 Section 3 - Placement - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0559	0.0000	1.0559	0.5746	0.0000	0.5746			0.0000			0.0000
Off-Road	0.5989	6.4345	4.0189	9.4600e-003		0.2555	0.2555		0.2351	0.2351			850.0288			855.6765
Total	**0.5989**	**6.4345**	**4.0189**	**9.4600e-003**	**1.0559**	**0.2555**	**1.3113**	**0.5746**	**0.2351**	**0.8096**			**850.0288**			**855.6765**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0339	0.1467	0.6104	3.4000e-004	0.0140	1.3700e-003	0.0154	3.6300e-003	1.2600e-003	4.8800e-003			28.6036			28.6110
Vendor	2.4200e-003	0.0190	0.0316	6.0000e-005	1.6500e-003	2.8000e-004	1.9300e-003	4.7000e-004	2.6000e-004	7.3000e-004			5.2552			5.2560
Worker	5.5100e-003	8.1300e-003	0.0775	2.2000e-004	0.0183	1.4000e-004	0.0184	4.8600e-003	1.3000e-004	4.9900e-003			14.8188			14.8338
Total	**0.0418**	**0.1738**	**0.7194**	**6.2000e-004**	**0.0340**	**1.7900e-003**	**0.0357**	**8.9600e-003**	**1.6500e-003**	**0.0106**			**48.6776**			**48.7008**

3.13 Section 3 - Placement - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4751	0.0000	0.4751	0.2586	0.0000	0.2586			0.0000			0.0000
Off-Road	0.5989	6.4345	4.0188	9.4600e-003		0.2555	0.2555		0.2351	0.2351			850.0278			855.6755
Total	**0.5989**	**6.4345**	**4.0188**	**9.4600e-003**	**0.4751**	**0.2555**	**0.7306**	**0.2586**	**0.2351**	**0.4936**			**850.0278**			**855.6755**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0339	0.1467	0.6104	3.4000e-004	0.0140	1.3700e-003	0.0154	3.6300e-003	1.2600e-003	4.8800e-003			28.6036			28.6110
Vendor	2.4200e-003	0.0190	0.0316	6.0000e-005	1.6500e-003	2.8000e-004	1.9300e-003	4.7000e-004	2.6000e-004	7.3000e-004			5.2552			5.2560
Worker	5.5100e-003	8.1300e-003	0.0775	2.2000e-004	0.0183	1.4000e-004	0.0184	4.8600e-003	1.3000e-004	4.9900e-003			14.8188			14.8338
Total	**0.0418**	**0.1738**	**0.7194**	**6.2000e-004**	**0.0340**	**1.7900e-003**	**0.0357**	**8.9600e-003**	**1.6500e-003**	**0.0106**			**48.6776**			**48.7008**

3.14 Section 5 - Degrade - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2690	0.0000	0.2690	0.1437	0.0000	0.1437			0.0000			0.0000
Off-Road	0.8084	9.2521	5.4331	0.0121		0.3581	0.3581		0.3294	0.3294			1,105.3889			1,112.6155
Total	**0.8084**	**9.2521**	**5.4331**	**0.0121**	**0.2690**	**0.3581**	**0.6270**	**0.1437**	**0.3294**	**0.4732**			**1,105.3889**			**1,112.6155**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0801	0.3369	1.3687	7.3000e-004	0.0134	3.0000e-003	0.0164	3.6900e-003	2.7600e-003	6.4500e-003			62.8666			62.8824
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	7.1000e-003	0.0105	0.1001	2.6000e-004	0.0215	1.7000e-004	0.0216	5.7100e-003	1.5000e-004	5.8600e-003			18.0324			18.0513
Total	**0.0872**	**0.3474**	**1.4688**	**9.9000e-004**	**0.0348**	**3.1700e-003**	**0.0380**	**9.4000e-003**	**2.9100e-003**	**0.0123**			**80.8991**			**80.9337**

3.14 Section 5 - Degrade - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1210	0.0000	0.1210	0.0647	0.0000	0.0647			0.0000			0.0000
Off-Road	0.8084	9.2521	5.4331	0.0121		0.3581	0.3581		0.3294	0.3294			1,105.3876			1,112.6141
Total	**0.8084**	**9.2521**	**5.4331**	**0.0121**	**0.1210**	**0.3581**	**0.4791**	**0.0647**	**0.3294**	**0.3941**			**1,105.3876**			**1,112.6141**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0801	0.3369	1.3687	7.3000e-004	0.0134	3.0000e-003	0.0164	3.6900e-003	2.7600e-003	6.4500e-003			62.8666			62.8824
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	7.1000e-003	0.0105	0.1001	2.6000e-004	0.0215	1.7000e-004	0.0216	5.7100e-003	1.5000e-004	5.8600e-003			18.0324			18.0513
Total	**0.0872**	**0.3474**	**1.4688**	**9.9000e-004**	**0.0348**	**3.1700e-003**	**0.0380**	**9.4000e-003**	**2.9100e-003**	**0.0123**			**80.8991**			**80.9337**

3.15 Section 4 - Stripping - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0662	0.0000	0.0662	0.0364	0.0000	0.0364			0.0000			0.0000
Off-Road	0.1155	1.3245	0.7918	1.6800e-003		0.0518	0.0518		0.0477	0.0477			153.3423			154.3448
Total	**0.1155**	**1.3245**	**0.7918**	**1.6800e-003**	**0.0662**	**0.0518**	**0.1180**	**0.0364**	**0.0477**	**0.0841**			**153.3423**			**154.3448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	9.9000e-004	1.4600e-003	0.0140	4.0000e-005	2.9900e-003	2.0000e-005	3.0200e-003	8.0000e-004	2.0000e-005	8.2000e-004			2.5162			2.5188
Total	**9.9000e-004**	**1.4600e-003**	**0.0140**	**4.0000e-005**	**2.9900e-003**	**2.0000e-005**	**3.0200e-003**	**8.0000e-004**	**2.0000e-005**	**8.2000e-004**			**2.5162**			**2.5188**

3.15 Section 4 - Stripping - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0298	0.0000	0.0298	0.0164	0.0000	0.0164			0.0000			0.0000
Off-Road	0.1155	1.3245	0.7918	1.6800e-003		0.0518	0.0518		0.0477	0.0477			153.3421			154.3446
Total	**0.1155**	**1.3245**	**0.7918**	**1.6800e-003**	**0.0298**	**0.0518**	**0.0816**	**0.0164**	**0.0477**	**0.0640**			**153.3421**			**154.3446**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	9.9000e-004	1.4600e-003	0.0140	4.0000e-005	2.9900e-003	2.0000e-005	3.0200e-003	8.0000e-004	2.0000e-005	8.2000e-004			2.5162			2.5188
Total	**9.9000e-004**	**1.4600e-003**	**0.0140**	**4.0000e-005**	**2.9900e-003**	**2.0000e-005**	**3.0200e-003**	**8.0000e-004**	**2.0000e-005**	**8.2000e-004**			**2.5162**			**2.5188**

3.16 Section 4 - Placement - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0607	0.0000	1.0607	0.5727	0.0000	0.5727			0.0000			0.0000
Off-Road	0.2126	2.3763	1.3964	3.1100e-003		0.0946	0.0946		0.0870	0.0870			283.5629			285.4167
Total	**0.2126**	**2.3763**	**1.3964**	**3.1100e-003**	**1.0607**	**0.0946**	**1.1553**	**0.5727**	**0.0870**	**0.6598**			**283.5629**			**285.4167**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0211	0.0887	0.3605	1.9000e-004	0.0223	7.9000e-004	0.0231	5.5800e-003	7.3000e-004	6.3100e-003			16.5571			16.5612
Vendor	8.6000e-004	6.8300e-003	0.0109	2.0000e-005	5.4000e-004	1.0000e-004	6.4000e-004	1.6000e-004	9.0000e-005	2.5000e-004			1.7545			1.7548
Worker	1.9900e-003	2.9300e-003	0.0280	7.0000e-005	6.0000e-003	5.0000e-005	6.0500e-003	1.6000e-003	4.0000e-005	1.6400e-003			5.0437			5.0490
Total	**0.0239**	**0.0985**	**0.3993**	**2.8000e-004**	**0.0289**	**9.4000e-004**	**0.0298**	**7.3400e-003**	**8.6000e-004**	**8.2000e-003**			**23.3554**			**23.3651**

3.16 Section 4 - Placement - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4773	0.0000	0.4773	0.2577	0.0000	0.2577			0.0000			0.0000
Off-Road	0.2126	2.3763	1.3964	3.1100e-003		0.0946	0.0946		0.0870	0.0870			283.5626			285.4164
Total	**0.2126**	**2.3763**	**1.3964**	**3.1100e-003**	**0.4773**	**0.0946**	**0.5719**	**0.2577**	**0.0870**	**0.3448**			**283.5626**			**285.4164**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0211	0.0887	0.3605	1.9000e-004	0.0223	7.9000e-004	0.0231	5.5800e-003	7.3000e-004	6.3100e-003			16.5571			16.5612
Vendor	8.6000e-004	6.8300e-003	0.0109	2.0000e-005	5.4000e-004	1.0000e-004	6.4000e-004	1.6000e-004	9.0000e-005	2.5000e-004			1.7545			1.7548
Worker	1.9900e-003	2.9300e-003	0.0280	7.0000e-005	6.0000e-003	5.0000e-005	6.0500e-003	1.6000e-003	4.0000e-005	1.6400e-003			5.0437			5.0490
Total	**0.0239**	**0.0985**	**0.3993**	**2.8000e-004**	**0.0289**	**9.4000e-004**	**0.0298**	**7.3400e-003**	**8.6000e-004**	**8.2000e-003**			**23.3554**			**23.3651**

3.16 Section 4 - Placement - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0607	0.0000	1.0607	0.5727	0.0000	0.5727			0.0000			0.0000
Off-Road	1.4129	15.1813	9.4820	0.0223		0.6028	0.6028		0.5546	0.5546			2,005.5367			2,018.8618
Total	**1.4129**	**15.1813**	**9.4820**	**0.0223**	**1.0607**	**0.6028**	**1.6635**	**0.5727**	**0.5546**	**1.1273**			**2,005.5367**			**2,018.8618**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1385	0.5998	2.4962	1.3800e-003	0.0279	5.5900e-003	0.0335	7.6300e-003	5.1400e-003	0.0128			116.9803			117.0104
Vendor	5.7100e-003	0.0449	0.0745	1.4000e-004	3.8900e-003	6.7000e-004	4.5600e-003	1.1100e-003	6.2000e-004	1.7300e-003			12.3989			12.4009
Worker	0.0130	0.0192	0.1828	5.1000e-004	0.0432	3.2000e-004	0.0435	0.0115	3.0000e-004	0.0118			34.9630			34.9984
Total	**0.1572**	**0.6638**	**2.7534**	**2.0300e-003**	**0.0750**	**6.5800e-003**	**0.0816**	**0.0202**	**6.0600e-003**	**0.0263**			**164.3422**			**164.4097**

3.16 Section 4 - Placement - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4773	0.0000	0.4773	0.2577	0.0000	0.2577			0.0000			0.0000
Off-Road	1.4129	15.1813	9.4820	0.0223		0.6028	0.6028		0.5546	0.5546			2,005.534 3			2,018.859 4
Total	**1.4129**	**15.1813**	**9.4820**	**0.0223**	**0.4773**	**0.6028**	**1.0801**	**0.2577**	**0.5546**	**0.8123**			**2,005.534 3**			**2,018.859 4**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1385	0.5998	2.4962	1.3800e-003	0.0279	5.5900e-003	0.0335	7.6300e-003	5.1400e-003	0.0128			116.9803			117.0104
Vendor	5.7100e-003	0.0449	0.0745	1.4000e-004	3.8900e-003	6.7000e-004	4.5600e-003	1.1100e-003	6.2000e-004	1.7300e-003			12.3989			12.4009
Worker	0.0130	0.0192	0.1828	5.1000e-004	0.0432	3.2000e-004	0.0435	0.0115	3.0000e-004	0.0118			34.9630			34.9984
Total	**0.1572**	**0.6638**	**2.7534**	**2.0300e-003**	**0.0750**	**6.5800e-003**	**0.0816**	**0.0202**	**6.0600e-003**	**0.0263**			**164.3422**			**164.4097**

3.17 Section 5 - Stripping - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0693	0.0000	0.0693	0.0381	0.0000	0.0381			0.0000			0.0000
Off-Road	0.1119	1.2367	0.7758	1.7600e-003		0.0482	0.0482		0.0444	0.0444			157.6868			158.7345
Total	**0.1119**	**1.2367**	**0.7758**	**1.7600e-003**	**0.0693**	**0.0482**	**0.1175**	**0.0381**	**0.0444**	**0.0824**			**157.6868**			**158.7345**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	9.4000e-004	1.3900e-003	0.0133	4.0000e-005	3.1300e-003	2.0000e-005	3.1500e-003	8.3000e-004	2.0000e-005	8.5000e-004			2.5360			2.5385
Total	**9.4000e-004**	**1.3900e-003**	**0.0133**	**4.0000e-005**	**3.1300e-003**	**2.0000e-005**	**3.1500e-003**	**8.3000e-004**	**2.0000e-005**	**8.5000e-004**			**2.5360**			**2.5385**

3.17 Section 5 - Stripping - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0312	0.0000	0.0312	0.0171	0.0000	0.0171			0.0000			0.0000
Off-Road	0.1119	1.2367	0.7758	1.7600e-003		0.0482	0.0482		0.0444	0.0444			157.6866			158.7343
Total	**0.1119**	**1.2367**	**0.7758**	**1.7600e-003**	**0.0312**	**0.0482**	**0.0794**	**0.0171**	**0.0444**	**0.0615**			**157.6866**			**158.7343**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	9.4000e-004	1.3900e-003	0.0133	4.0000e-005	3.1300e-003	2.0000e-005	3.1500e-003	8.3000e-004	2.0000e-005	8.5000e-004			2.5360			2.5385
Total	**9.4000e-004**	**1.3900e-003**	**0.0133**	**4.0000e-005**	**3.1300e-003**	**2.0000e-005**	**3.1500e-003**	**8.3000e-004**	**2.0000e-005**	**8.5000e-004**			**2.5360**			**2.5385**

3.18 Section 5 - Placement - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9869	0.0000	0.9869	0.5352	0.0000	0.5352			0.0000			0.0000
Off-Road	1.5065	16.1867	10.1099	0.0238		0.6427	0.6427		0.5913	0.5913			2,138.3537			2,152.5613
Total	**1.5065**	**16.1867**	**10.1099**	**0.0238**	**0.9869**	**0.6427**	**1.6297**	**0.5352**	**0.5913**	**1.1265**			**2,138.3537**			**2,152.5613**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0939	0.4064	1.6916	9.3000e-004	0.0172	3.7900e-003	0.0210	4.7300e-003	3.4800e-003	8.2100e-003			79.2744			79.2948
Vendor	6.0900e-003	0.0478	0.0794	1.5000e-004	4.1400e-003	7.2000e-004	4.8600e-003	1.1900e-003	6.6000e-004	1.8500e-003			13.2201			13.2222
Worker	0.0139	0.0205	0.1949	5.5000e-004	0.0460	3.5000e-004	0.0464	0.0122	3.2000e-004	0.0126			37.2785			37.3162
Total	**0.1138**	**0.4747**	**1.9659**	**1.6300e-003**	**0.0673**	**4.8600e-003**	**0.0722**	**0.0182**	**4.4600e-003**	**0.0226**			**129.7729**			**129.8331**

3.18 Section 5 - Placement - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4441	0.0000	0.4441	0.2409	0.0000	0.2409			0.0000			0.0000
Off-Road	1.5065	16.1867	10.1099	0.0238		0.6427	0.6427		0.5913	0.5913			2,138.3511			2,152.5587
Total	**1.5065**	**16.1867**	**10.1099**	**0.0238**	**0.4441**	**0.6427**	**1.0868**	**0.2409**	**0.5913**	**0.8322**			**2,138.3511**			**2,152.5587**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0939	0.4064	1.6916	9.3000e-004	0.0172	3.7900e-003	0.0210	4.7300e-003	3.4800e-003	8.2100e-003			79.2744			79.2948
Vendor	6.0900e-003	0.0478	0.0794	1.5000e-004	4.1400e-003	7.2000e-004	4.8600e-003	1.1900e-003	6.6000e-004	1.8500e-003			13.2201			13.2222
Worker	0.0139	0.0205	0.1949	5.5000e-004	0.0460	3.5000e-004	0.0464	0.0122	3.2000e-004	0.0126			37.2785			37.3162
Total	**0.1138**	**0.4747**	**1.9659**	**1.6300e-003**	**0.0673**	**4.8600e-003**	**0.0722**	**0.0182**	**4.4600e-003**	**0.0226**			**129.7729**			**129.8331**

3.19 Section 3 - Roadway - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0189	0.1934	0.1265	2.4000e-004		8.8000e-003	8.8000e-003		8.0900e-003	8.0900e-003			21.7525			21.8970
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0189**	**0.1934**	**0.1265**	**2.4000e-004**		**8.8000e-003**	**8.8000e-003**		**8.0900e-003**	**8.0900e-003**			**21.7525**			**21.8970**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	2.0000e-004	2.9000e-004	2.7500e-003	1.0000e-005	6.5000e-004	0.0000	6.5000e-004	1.7000e-004	0.0000	1.8000e-004			0.5256			0.5261
Total	**2.0000e-004**	**2.9000e-004**	**2.7500e-003**	**1.0000e-005**	**6.5000e-004**	**0.0000**	**6.5000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**			**0.5256**			**0.5261**

3.19 Section 3 - Roadway - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0189	0.1934	0.1265	2.4000e-004		8.8000e-003	8.8000e-003		8.0900e-003	8.0900e-003			21.7525			21.8970
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0189**	**0.1934**	**0.1265**	**2.4000e-004**		**8.8000e-003**	**8.8000e-003**		**8.0900e-003**	**8.0900e-003**			**21.7525**			**21.8970**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	2.0000e-004	2.9000e-004	2.7500e-003	1.0000e-005	6.5000e-004	0.0000	6.5000e-004	1.7000e-004	0.0000	1.8000e-004			0.5256			0.5261
Total	**2.0000e-004**	**2.9000e-004**	**2.7500e-003**	**1.0000e-005**	**6.5000e-004**	**0.0000**	**6.5000e-004**	**1.7000e-004**	**0.0000**	**1.8000e-004**			**0.5256**			**0.5261**

3.20 Pond A12 Ecotone - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.8488	0.0000	0.8488	0.4416	0.0000	0.4416			0.0000			0.0000
Off-Road	0.4774	4.9016	3.1069	6.9100e-003		0.2063	0.2063		0.1898	0.1898			620.7510			624.8754
Total	**0.4774**	**4.9016**	**3.1069**	**6.9100e-003**	**0.8488**	**0.2063**	**1.0551**	**0.4416**	**0.1898**	**0.6314**			**620.7510**			**624.8754**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.3532	1.5297	6.3666	3.5100e-003	0.0646	0.0143	0.0789	0.0178	0.0131	0.0309			298.3636			298.4404
Vendor	4.9600e-003	0.0389	0.0646	1.2000e-004	3.3700e-003	5.8000e-004	3.9500e-003	9.7000e-004	5.4000e-004	1.5000e-003			10.7567			10.7584
Worker	4.4700e-003	6.6100e-003	0.0629	1.8000e-004	0.0149	1.1000e-004	0.0150	3.9500e-003	1.0000e-004	4.0500e-003			12.0366			12.0488
Total	**0.3627**	**1.5753**	**6.4941**	**3.8100e-003**	**0.0828**	**0.0150**	**0.0978**	**0.0227**	**0.0137**	**0.0365**			**321.1569**			**321.2476**

3.20 Pond A12 Ecotone - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3820	0.0000	0.3820	0.1987	0.0000	0.1987			0.0000			0.0000
Off-Road	0.4774	4.9016	3.1069	6.9100e-003		0.2063	0.2063		0.1898	0.1898			620.7502			624.8746
Total	**0.4774**	**4.9016**	**3.1069**	**6.9100e-003**	**0.3820**	**0.2063**	**0.5882**	**0.1987**	**0.1898**	**0.3885**			**620.7502**			**624.8746**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.3532	1.5297	6.3666	3.5100e-003	0.0646	0.0143	0.0789	0.0178	0.0131	0.0309			298.3636			298.4404
Vendor	4.9600e-003	0.0389	0.0646	1.2000e-004	3.3700e-003	5.8000e-004	3.9500e-003	9.7000e-004	5.4000e-004	1.5000e-003			10.7567			10.7584
Worker	4.4700e-003	6.6100e-003	0.0629	1.8000e-004	0.0149	1.1000e-004	0.0150	3.9500e-003	1.0000e-004	4.0500e-003			12.0366			12.0488
Total	**0.3627**	**1.5753**	**6.4941**	**3.8100e-003**	**0.0828**	**0.0150**	**0.0978**	**0.0227**	**0.0137**	**0.0365**			**321.1569**			**321.2476**

3.21 Section 4 - Roadway - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0395	0.4044	0.2644	5.1000e-004		0.0184	0.0184		0.0169	0.0169			45.4825			45.7847
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0395**	**0.4044**	**0.2644**	**5.1000e-004**		**0.0184**	**0.0184**		**0.0169**	**0.0169**			**45.4825**			**45.7847**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	4.1000e-004	6.0000e-004	5.7500e-003	2.0000e-005	1.3600e-003	1.0000e-005	1.3700e-003	3.6000e-004	1.0000e-005	3.7000e-004			1.0989			1.1000
Total	**4.1000e-004**	**6.0000e-004**	**5.7500e-003**	**2.0000e-005**	**1.3600e-003**	**1.0000e-005**	**1.3700e-003**	**3.6000e-004**	**1.0000e-005**	**3.7000e-004**			**1.0989**			**1.1000**

3.21 Section 4 - Roadway - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0395	0.4044	0.2644	5.1000e-004		0.0184	0.0184		0.0169	0.0169			45.4825			45.7847
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0395**	**0.4044**	**0.2644**	**5.1000e-004**		**0.0184**	**0.0184**		**0.0169**	**0.0169**			**45.4825**			**45.7847**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	4.1000e-004	6.0000e-004	5.7500e-003	2.0000e-005	1.3600e-003	1.0000e-005	1.3700e-003	3.6000e-004	1.0000e-005	3.7000e-004			1.0989			1.1000
Total	**4.1000e-004**	**6.0000e-004**	**5.7500e-003**	**2.0000e-005**	**1.3600e-003**	**1.0000e-005**	**1.3700e-003**	**3.6000e-004**	**1.0000e-005**	**3.7000e-004**			**1.0989**			**1.1000**

3.22 Section 5 - Roadway - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0258	0.2638	0.1725	3.3000e-004		0.0120	0.0120		0.0110	0.0110			29.6625			29.8596
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0258**	**0.2638**	**0.1725**	**3.3000e-004**		**0.0120**	**0.0120**		**0.0110**	**0.0110**			**29.6625**			**29.8596**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	2.7000e-004	3.9000e-004	3.7500e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.9000e-004	2.4000e-004	1.0000e-005	2.4000e-004			0.7167			0.7174
Total	**2.7000e-004**	**3.9000e-004**	**3.7500e-003**	**1.0000e-005**	**8.8000e-004**	**1.0000e-005**	**8.9000e-004**	**2.4000e-004**	**1.0000e-005**	**2.4000e-004**			**0.7167**			**0.7174**

3.22 Section 5 - Roadway - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0258	0.2638	0.1725	3.3000e-004		0.0120	0.0120		0.0110	0.0110			29.6625			29.8596
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0258**	**0.2638**	**0.1725**	**3.3000e-004**		**0.0120**	**0.0120**		**0.0110**	**0.0110**			**29.6625**			**29.8596**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	2.7000e-004	3.9000e-004	3.7500e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.9000e-004	2.4000e-004	1.0000e-005	2.4000e-004			0.7167			0.7174
Total	**2.7000e-004**	**3.9000e-004**	**3.7500e-003**	**1.0000e-005**	**8.8000e-004**	**1.0000e-005**	**8.9000e-004**	**2.4000e-004**	**1.0000e-005**	**2.4000e-004**			**0.7167**			**0.7174**

3.23 Pond A18 Ecotone Phase 1 - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9933	0.0000	0.9933	0.5112	0.0000	0.5112			0.0000			0.0000
Off-Road	0.6999	5.4086	4.9276	0.0159		0.2157	0.2157		0.1984	0.1984			1,397.9659			1,407.4606
Total	**0.6999**	**5.4086**	**4.9276**	**0.0159**	**0.9933**	**0.2157**	**1.2090**	**0.5112**	**0.1984**	**0.7096**			**1,397.9659**			**1,407.4606**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.4094	1.4744	8.5456	5.2300e-003	0.0974	0.0199	0.1173	0.0269	0.0183	0.0452			436.5305			436.6493
Vendor	4.5000e-003	0.0235	0.0636	1.4000e-004	3.8900e-003	5.2000e-004	4.4100e-003	1.1200e-003	4.8000e-004	1.5900e-003			12.0587			12.0606
Worker	7.3000e-003	0.0103	0.0988	3.7000e-004	0.0308	2.3000e-004	0.0311	8.2000e-003	2.1000e-004	8.4100e-003			22.8136			22.8342
Total	**0.4212**	**1.5081**	**8.7079**	**5.7400e-003**	**0.1321**	**0.0207**	**0.1527**	**0.0362**	**0.0190**	**0.0552**			**471.4028**			**471.5441**

3.23 Pond A18 Ecotone Phase 1 - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4470	0.0000	0.4470	0.2300	0.0000	0.2300			0.0000			0.0000
Off-Road	0.6999	5.4086	4.9276	0.0159		0.2157	0.2157		0.1984	0.1984			1,397.9642			1,407.4589
Total	**0.6999**	**5.4086**	**4.9276**	**0.0159**	**0.4470**	**0.2157**	**0.6627**	**0.2300**	**0.1984**	**0.4284**			**1,397.9642**			**1,407.4589**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.4094	1.4744	8.5456	5.2300e-003	0.0974	0.0199	0.1173	0.0269	0.0183	0.0452			436.5305			436.6493
Vendor	4.5000e-003	0.0235	0.0636	1.4000e-004	3.8900e-003	5.2000e-004	4.4100e-003	1.1200e-003	4.8000e-004	1.5900e-003			12.0587			12.0606
Worker	7.3000e-003	0.0103	0.0988	3.7000e-004	0.0308	2.3000e-004	0.0311	8.2000e-003	2.1000e-004	8.4100e-003			22.8136			22.8342
Total	**0.4212**	**1.5081**	**8.7079**	**5.7400e-003**	**0.1321**	**0.0207**	**0.1527**	**0.0362**	**0.0190**	**0.0552**			**471.4028**			**471.5441**

3.24 Pond A18 Ecotone Phase 2 - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9670	0.0000	0.9670	0.5122	0.0000	0.5122			0.0000			0.0000
Off-Road	0.6905	5.0806	4.8872	0.0161		0.2011	0.2011		0.1850	0.1850			1,416.9157			1,426.5391
Total	**0.6905**	**5.0806**	**4.8872**	**0.0161**	**0.9670**	**0.2011**	**1.1681**	**0.5122**	**0.1850**	**0.6971**			**1,416.9157**			**1,426.5391**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1352	0.5014	2.8709	1.8000e-003	0.0334	6.8600e-003	0.0403	9.2100e-003	6.3100e-003	0.0155			149.8057			149.8465
Vendor	4.4200e-003	0.0236	0.0626	1.4000e-004	3.9400e-003	5.3000e-004	4.4700e-003	1.1300e-003	4.9000e-004	1.6200e-003			12.2232			12.2251
Worker	7.0300e-003	9.8700e-003	0.0946	3.7000e-004	0.0312	2.3000e-004	0.0315	8.3100e-003	2.1000e-004	8.5200e-003			22.7971			22.8171
Total	**0.1467**	**0.5348**	**3.0280**	**2.3100e-003**	**0.0686**	**7.6200e-003**	**0.0762**	**0.0187**	**7.0100e-003**	**0.0257**			**184.8259**			**184.8887**

3.24 Pond A18 Ecotone Phase 2 - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4352	0.0000	0.4352	0.2305	0.0000	0.2305			0.0000			0.0000
Off-Road	0.6905	5.0806	4.8872	0.0161		0.2011	0.2011		0.1850	0.1850			1,416.9140			1,426.5374
Total	**0.6905**	**5.0806**	**4.8872**	**0.0161**	**0.4352**	**0.2011**	**0.6362**	**0.2305**	**0.1850**	**0.4154**			**1,416.9140**			**1,426.5374**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1352	0.5014	2.8709	1.8000e-003	0.0334	6.8600e-003	0.0403	9.2100e-003	6.3100e-003	0.0155			149.8057			149.8465
Vendor	4.4200e-003	0.0236	0.0626	1.4000e-004	3.9400e-003	5.3000e-004	4.4700e-003	1.1300e-003	4.9000e-004	1.6200e-003			12.2232			12.2251
Worker	7.0300e-003	9.8700e-003	0.0946	3.7000e-004	0.0312	2.3000e-004	0.0315	8.3100e-003	2.1000e-004	8.5200e-003			22.7971			22.8171
Total	**0.1467**	**0.5348**	**3.0280**	**2.3100e-003**	**0.0686**	**7.6200e-003**	**0.0762**	**0.0187**	**7.0100e-003**	**0.0257**			**184.8259**			**184.8887**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546690	0.063179	0.174273	0.121979	0.033815	0.004830	0.015501	0.025302	0.002100	0.003252	0.006757	0.000658	0.001666

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**			**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**			**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000			0.0000
Total		**0.0000**			**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000			0.0000
Total		**0.0000**			**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000			2.0000e-005			2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000			2.0000e-005			2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000			2.0000e-005			2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**2.0000e-005**			**2.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000			2.0000e-005			2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**2.0000e-005**			**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000			0.0000
Unmitigated	0.0000			0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000			0.0000
Total		**0.0000**			**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000			0.0000
Total		**0.0000**			**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000			0.0000
Unmitigated	0.0000			0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000			0.0000
Total		**0.0000**			**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000			0.0000
Total		**0.0000**			**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Shoreline - Alt3 - LPP

San Francisco Bay Area Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	1.00	User Defined Unit	3,000.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project will allow approximately 3,000 acres of former salt pond to be restored

Construction Phase - Estimated construction dates

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using assumed equipment from original AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

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Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Off-road Equipment - Using equipement list from orginial AQ model run

Trips and VMT - # workers = pieces of equipment x 1.25
4 miles RT assumed for hauling

Demolition - No Demo

Grading - Section 1 = 4380', Section 2=2120', Section 3=2975', Section 4=5525', Section 5=4775' x 112' width + 30' TCE on each side. Degrade=50' width.
Ecotone=480' width

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	15,500.00	65.00
tblConstructionPhase	NumDays	15,500.00	88.00
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tblConstructionPhase	NumDays	15,500.00	86.00
tblConstructionPhase	NumDays	15,500.00	172.00
tblConstructionPhase	NumDays	15,500.00	161.00

tblConstructionPhase	NumDays	15,500.00	131.00
tblConstructionPhase	NumDays	15,500.00	151.00
tblConstructionPhase	NumDays	15,500.00	153.00
tblConstructionPhase	NumDays	15,500.00	32.00
tblConstructionPhase	NumDays	15,500.00	174.00
tblConstructionPhase	NumDays	15,500.00	129.00
tblConstructionPhase	NumDays	15,500.00	65.00
tblConstructionPhase	NumDays	11,000.00	11.00
tblConstructionPhase	NumDays	11,000.00	23.00
tblConstructionPhase	NumDays	11,000.00	15.00
tblConstructionPhase	NumDays	11,000.00	11.00
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	6,000.00	22.00
tblConstructionPhase	NumDays	6,000.00	22.00
tblConstructionPhase	NumDays	6,000.00	23.00
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tblConstructionPhase	PhaseEndDate	7/1/2019	3/31/2019
tblConstructionPhase	PhaseEndDate	7/29/2019	12/31/2018
tblConstructionPhase	PhaseEndDate	9/13/2019	9/15/2019
tblConstructionPhase	PhaseEndDate	4/20/2020	10/30/2023
tblConstructionPhase	PhaseEndDate	5/30/2024	10/30/2024
tblConstructionPhase	PhaseEndDate	9/13/2017	8/15/2017
tblConstructionPhase	PhaseEndDate	4/16/2018	3/31/2018
tblConstructionPhase	PhaseEndDate	6/14/2018	6/29/2018
tblConstructionPhase	PhaseEndDate	9/30/2019	4/15/2019
tblConstructionPhase	PhaseEndDate	11/15/2019	8/30/2019

tblConstructionPhase	PhaseEndDate	7/13/2018	4/15/2018
tblConstructionPhase	PhaseEndDate	5/15/2018	7/31/2018
tblConstructionPhase	PhaseEndDate	1/30/2019	11/30/2018
tblConstructionPhase	PhaseEndDate	8/30/2019	1/31/2019
tblConstructionPhase	PhaseEndDate	4/17/2018	8/31/2017
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tblConstructionPhase	PhaseStartDate	4/1/2019	9/1/2018
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tblConstructionPhase	PhaseStartDate	10/31/2023	4/1/2024
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tblConstructionPhase	PhaseStartDate	8/31/2019	9/1/2019
tblConstructionPhase	PhaseStartDate	6/30/2018	4/1/2018
tblConstructionPhase	PhaseStartDate	4/16/2018	6/30/2018
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tblTripsAndVMT	VendorTripNumber	0.00	8.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	49.6349	550.3022	346.6966	0.6371	26.3167	22.0882	48.4049	13.7895	20.3209	34.1104			64,709.0773			65,104.1601
2018	64.3316	690.3020	464.2278	0.9439	35.4366	26.5665	62.0031	17.8473	24.4409	42.2881			94,266.8599			94,844.0620
2019	60.3967	622.6952	438.8322	0.9553	40.7586	24.1541	63.9551	20.9182	22.2217	42.9730			93,843.2882			94,429.5152
2023	14.2085	91.0227	146.5854	0.2873	14.9673	3.1278	18.0952	7.2644	2.8776	10.1421			27,370.8561			27,511.4855
2024	10.7474	73.1922	92.2489	0.2415	13.5699	2.7270	16.2968	6.9468	2.5088	9.4556			23,122.8615			23,262.4137
Total	**199.3191**	**2,027.5143**	**1,488.5909**	**3.0650**	**131.0492**	**78.6636**	**208.7551**	**66.7662**	**72.3699**	**138.9692**			**303,312.9430**			**305,151.6365**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	49.6349	550.3022	346.6966	0.6371	12.8804	22.0882	34.9687	6.4820	20.3209	26.8029			64,709.0773			65,104.1601
2018	64.3316	690.3020	464.2278	0.9439	18.4996	26.5665	45.0660	8.6928	24.4409	33.1337			94,266.8598			94,844.0619
2019	60.3967	622.6952	438.8322	0.9553	20.1051	24.1541	43.7152	9.8907	22.2217	32.0002			93,843.2881			94,429.5151
2023	14.2085	91.0227	146.5854	0.2873	7.7313	3.1278	10.8591	3.5408	2.8776	6.4184			27,370.8561			27,511.4854
2024	10.7474	73.1922	92.2489	0.2415	6.6175	2.7270	9.3444	3.2646	2.5088	5.7734			23,122.8615			23,262.4137
Total	**199.3191**	**2,027.5143**	**1,488.5909**	**3.0650**	**65.8338**	**78.6636**	**143.9535**	**31.8709**	**72.3699**	**104.1286**			**303,312.9428**			**305,151.6362**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**49.76**	**0.00**	**31.04**	**52.26**	**0.00**	**25.07**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.2000e-004			2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**2.2000e-004**			**2.3000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.2000e-004			2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**2.2000e-004**			**2.3000e-004**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Section 1 - Degrade	Grading	4/1/2017	6/30/2017	5	65	
2	Section 1 - Stripping	Site Preparation	7/1/2017	7/31/2017	5	21	
3	Section 2 - Degrade	Grading	7/1/2017	8/15/2017	5	32	
4	Section 1 - Placement	Grading	8/1/2017	3/31/2018	5	174	
5	Section 2 - Stripping	Site Preparation	8/16/2017	8/31/2017	5	12	
6	Section 2 - Placement	Grading	9/1/2017	2/28/2018	5	129	
7	Section 2 - Roadway	Paving	3/1/2018	3/15/2018	5	11	
8	Section 3 - Degrade	Grading	4/1/2018	6/29/2018	5	65	
9	Section 1 - Roadway	Paving	4/1/2018	4/15/2018	5	10	
10	Section 3 - Stripping	Site Preparation	6/30/2018	7/31/2018	5	22	
11	Section 4 - Degrade	Grading	7/1/2018	10/31/2018	5	88	
12	Section 3 - Placement	Grading	8/1/2018	3/31/2019	5	173	
13	Section 5 - Degrade	Grading	9/1/2018	12/31/2018	5	86	
14	Section 4 - Stripping	Site Preparation	11/1/2018	11/30/2018	5	22	
15	Section 4 - Placement	Grading	12/1/2018	7/30/2019	5	172	
16	Section 5 - Stripping	Site Preparation	1/1/2019	1/31/2019	5	23	
17	Section 5 - Placement	Grading	2/1/2019	9/15/2019	5	161	
18	Section 3 - Roadway	Paving	4/1/2019	4/15/2019	5	11	
19	Pond A12 Ecotone	Grading	4/16/2019	10/15/2019	5	131	
20	Section 4 - Roadway	Paving	7/31/2019	8/30/2019	5	23	
21	Section 5 - Roadway	Paving	9/1/2019	9/20/2019	5	15	
22	Pond A18 Ecotone Phase 1	Grading	4/1/2023	10/30/2023	5	151	
23	Pond A18 Ecotone Phase 2	Grading	4/1/2024	10/30/2024	5	153	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Section 1 - Degrade	Excavators	2	8.00	162	0.38
Section 1 - Degrade	Graders	0	8.00	174	0.41
Section 1 - Degrade	Off-Highway Trucks	12	8.00	400	0.38
Section 1 - Degrade	Rubber Tired Dozers	1	8.00	255	0.40
Section 1 - Degrade	Scrapers	7	8.00	361	0.48
Section 1 - Degrade	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 1 - Stripping	Excavators	1	8.00	162	0.38
Section 1 - Stripping	Off-Highway Trucks	6	8.00	400	0.38
Section 1 - Stripping	Rubber Tired Dozers	1	8.00	255	0.40
Section 1 - Stripping	Scrapers	4	8.00	361	0.48
Section 1 - Stripping	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 2 - Degrade	Excavators	2	8.00	162	0.38
Section 2 - Degrade	Graders	0	8.00	174	0.41
Section 2 - Degrade	Off-Highway Trucks	12	8.00	400	0.38
Section 2 - Degrade	Rubber Tired Dozers	1	8.00	255	0.40
Section 2 - Degrade	Scrapers	7	8.00	361	0.48
Section 2 - Degrade	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 1 - Placement	Excavators	2	8.00	162	0.38
Section 1 - Placement	Graders	1	8.00	174	0.41
Section 1 - Placement	Off-Highway Trucks	14	8.00	400	0.38
Section 1 - Placement	Rollers	1	8.00	80	0.38
Section 1 - Placement	Rubber Tired Dozers	2	8.00	255	0.40
Section 1 - Placement	Scrapers	5	8.00	361	0.48

Section 1 - Placement	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Section 2 - Stripping	Excavators	1	8.00	162	0.38
Section 2 - Stripping	Off-Highway Trucks	6	8.00	400	0.38
Section 2 - Stripping	Rubber Tired Dozers	1	8.00	255	0.40
Section 2 - Stripping	Scrapers	4	8.00	361	0.48
Section 2 - Stripping	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 2 - Placement	Excavators	2	8.00	162	0.38
Section 2 - Placement	Graders	1	8.00	174	0.41
Section 2 - Placement	Off-Highway Trucks	14	8.00	400	0.38
Section 2 - Placement	Rollers	1	8.00	80	0.38
Section 2 - Placement	Rubber Tired Dozers	2	8.00	255	0.40
Section 2 - Placement	Scrapers	5	8.00	361	0.48
Section 2 - Placement	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 2 - Roadway	Graders	1	8.00	174	0.41
Section 2 - Roadway	Off-Highway Trucks	2	8.00	400	0.38
Section 2 - Roadway	Pavers	0	8.00	125	0.42
Section 2 - Roadway	Paving Equipment	0	8.00	130	0.36
Section 2 - Roadway	Rollers	1	8.00	80	0.38
Section 2 - Roadway	Rubber Tired Dozers	1	8.00	255	0.40
Section 3 - Degrade	Excavators	2	8.00	162	0.38
Section 3 - Degrade	Graders	0	8.00	174	0.41
Section 3 - Degrade	Off-Highway Trucks	12	8.00	400	0.38
Section 3 - Degrade	Rubber Tired Dozers	1	8.00	255	0.40
Section 3 - Degrade	Scrapers	7	8.00	361	0.48
Section 3 - Degrade	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 1 - Roadway	Graders	1	8.00	174	0.41
Section 1 - Roadway	Off-Highway Trucks	2	8.00	400	0.38
Section 1 - Roadway	Pavers	0	8.00	125	0.42

Section 1 - Roadway	Paving Equipment		0	8.00	130	0.36
Section 1 - Roadway	Rollers		1	8.00	80	0.38
Section 1 - Roadway	Rubber Tired Dozers		1	8.00	255	0.40
Section 3 - Stripping	Excavators		1	8.00	162	0.38
Section 3 - Stripping	Off-Highway Trucks		6	8.00	400	0.38
Section 3 - Stripping	Rubber Tired Dozers		1	8.00	255	0.40
Section 3 - Stripping	Scrapers		4	8.00	361	0.48
Section 3 - Stripping	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 4 - Degrade	Excavators		2	8.00	162	0.38
Section 4 - Degrade	Graders		0	8.00	174	0.41
Section 4 - Degrade	Off-Highway Trucks		12	8.00	400	0.38
Section 4 - Degrade	Rubber Tired Dozers		1	8.00	255	0.40
Section 4 - Degrade	Scrapers		7	8.00	361	0.48
Section 4 - Degrade	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 3 - Placement	Excavators		2	8.00	162	0.38
Section 3 - Placement	Graders		1	8.00	174	0.41
Section 3 - Placement	Off-Highway Trucks		14	8.00	400	0.38
Section 3 - Placement	Rollers		1	8.00	80	0.38
Section 3 - Placement	Rubber Tired Dozers		2	8.00	255	0.40
Section 3 - Placement	Scrapers		5	8.00	361	0.48
Section 3 - Placement	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 5 - Degrade	Excavators		2	8.00	162	0.38
Section 5 - Degrade	Graders		0	8.00	174	0.41
Section 5 - Degrade	Off-Highway Trucks		12	8.00	400	0.38
Section 5 - Degrade	Rubber Tired Dozers		1	8.00	255	0.40
Section 5 - Degrade	Scrapers		7	8.00	361	0.48
Section 5 - Degrade	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 4 - Stripping	Excavators		1	8.00	162	0.38

Section 4 - Stripping	Off-Highway Trucks	6	8.00	400	0.38
Section 4 - Stripping	Rubber Tired Dozers	1	8.00	255	0.40
Section 4 - Stripping	Scrapers	4	8.00	361	0.48
Section 4 - Stripping	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 4 - Placement	Excavators	2	8.00	162	0.38
Section 4 - Placement	Graders	1	8.00	174	0.41
Section 4 - Placement	Off-Highway Trucks	14	8.00	400	0.38
Section 4 - Placement	Rollers	1	8.00	80	0.38
Section 4 - Placement	Rubber Tired Dozers	2	8.00	255	0.40
Section 4 - Placement	Scrapers	5	8.00	361	0.48
Section 4 - Placement	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 5 - Stripping	Excavators	1	8.00	162	0.38
Section 5 - Stripping	Off-Highway Trucks	6	8.00	400	0.38
Section 5 - Stripping	Rubber Tired Dozers	1	8.00	255	0.40
Section 5 - Stripping	Scrapers	4	8.00	361	0.48
Section 5 - Stripping	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 5 - Placement	Excavators	2	8.00	162	0.38
Section 5 - Placement	Graders	1	8.00	174	0.41
Section 5 - Placement	Off-Highway Trucks	14	8.00	400	0.38
Section 5 - Placement	Rollers	1	8.00	80	0.38
Section 5 - Placement	Rubber Tired Dozers	2	8.00	255	0.40
Section 5 - Placement	Scrapers	5	8.00	361	0.48
Section 5 - Placement	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Section 3 - Roadway	Graders	1	8.00	174	0.41
Section 3 - Roadway	Off-Highway Trucks	2	8.00	400	0.38
Section 3 - Roadway	Pavers	0	8.00	125	0.42
Section 3 - Roadway	Paving Equipment	0	8.00	130	0.36
Section 3 - Roadway	Rollers	1	8.00	80	0.38

Section 3 - Roadway	Rubber Tired Dozers		1	8.00	255	0.40
Pond A12 Ecotone	Excavators		0	8.00	162	0.38
Pond A12 Ecotone	Graders		1	8.00	174	0.41
Pond A12 Ecotone	Off-Highway Trucks		6	8.00	400	0.38
Pond A12 Ecotone	Rollers		1	8.00	80	0.38
Pond A12 Ecotone	Rubber Tired Dozers		2	8.00	255	0.40
Pond A12 Ecotone	Scrapers		0	8.00	361	0.48
Pond A12 Ecotone	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Section 4 - Roadway	Graders		1	8.00	174	0.41
Section 4 - Roadway	Off-Highway Trucks		2	8.00	400	0.38
Section 4 - Roadway	Pavers		0	8.00	125	0.42
Section 4 - Roadway	Paving Equipment		0	8.00	130	0.36
Section 4 - Roadway	Rollers		1	8.00	80	0.38
Section 4 - Roadway	Rubber Tired Dozers		1	8.00	255	0.40
Section 5 - Roadway	Graders		1	8.00	174	0.41
Section 5 - Roadway	Off-Highway Trucks		2	8.00	400	0.38
Section 5 - Roadway	Pavers		0	8.00	125	0.42
Section 5 - Roadway	Paving Equipment		0	8.00	130	0.36
Section 5 - Roadway	Rollers		1	8.00	80	0.38
Section 5 - Roadway	Rubber Tired Dozers		1	8.00	255	0.40
Pond A18 Ecotone Phase 1	Excavators		0	8.00	162	0.38
Pond A18 Ecotone Phase 1	Graders		1	8.00	174	0.41
Pond A18 Ecotone Phase 1	Off-Highway Trucks		14	8.00	400	0.38
Pond A18 Ecotone Phase 1	Rollers		1	8.00	80	0.38
Pond A18 Ecotone Phase 1	Rubber Tired Dozers		2	8.00	255	0.40
Pond A18 Ecotone Phase 1	Scrapers		0	8.00	361	0.48
Pond A18 Ecotone Phase 1	Tractors/Loaders/Backhoes		0	8.00	97	0.37
Pond A18 Ecotone Phase 2	Excavators		0	8.00	162	0.38

Pond A18 Ecotone Phase 2	Graders		1	8.00	174	0.41
Pond A18 Ecotone Phase 2	Off-Highway Trucks		14	8.00	400	0.38
Pond A18 Ecotone Phase 2	Rollers		1	8.00	80	0.38
Pond A18 Ecotone Phase 2	Rubber Tired Dozers		2	8.00	255	0.40
Pond A18 Ecotone Phase 2	Scrapers		0	8.00	361	0.48
Pond A18 Ecotone Phase 2	Tractors/Loaders/Backhoes		0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Section 1 - Degrade	22	55.00	0.00	9,624.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 1 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 2 - Degrade	22	55.00	0.00	5,027.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 1 - Placement	27	68.00	8.00	22,866.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 2 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 2 - Placement	25	63.00	8.00	11,200.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 2 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Section 3 - Degrade	22	55.00	0.00	7,614.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 1 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Section 3 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 4 - Degrade	22	55.00	0.00	17,194.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 3 - Placement	25	63.00	8.00	19,654.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 5 - Degrade	22	55.00	0.00	15,702.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 4 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 4 - Placement	25	63.00	8.00	33,871.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 5 - Stripping	12	30.00	0.00	0.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 5 - Placement	25	63.00	8.00	20,151.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 3 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond A12 Ecotone	10	25.00	8.00	75,842.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Section 4 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Section 5 - Roadway	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pond A18 Ecotone Phase 1	18	45.00	8.00	114,275.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT
Pond A18 Ecotone Phase 2	18	45.00	8.00	39,208.00	12.40	7.30	2.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Section 1 - Degrade - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2381	0.0000	6.2381	3.3394	0.0000	3.3394			0.0000			0.0000
Off-Road	21.4723	253.4665	144.3950	0.2815		9.9728	9.9728		9.1750	9.1750			28,787.1510			28,972.3779
Total	**21.4723**	**253.4665**	**144.3950**	**0.2815**	**6.2381**	**9.9728**	**16.2109**	**3.3394**	**9.1750**	**12.5144**			**28,787.1510**			**28,972.3779**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.5051	6.6399	20.6705	0.0138	0.2608	0.0573	0.3181	0.0717	0.0525	0.1242			1,342.2926			1,342.6044
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1993	0.2392	2.7906	6.3800e-003	0.5187	3.9700e-003	0.5226	0.1376	3.6600e-003	0.1412			515.7379			516.2652
Total	**1.7044**	**6.8791**	**23.4611**	**0.0202**	**0.7794**	**0.0613**	**0.8407**	**0.2092**	**0.0562**	**0.2654**			**1,858.0305**			**1,858.8696**

3.2 Section 1 - Degrade - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8072	0.0000	2.8072	1.5027	0.0000	1.5027			0.0000			0.0000
Off-Road	21.4723	253.4665	144.3950	0.2815		9.9728	9.9728		9.1750	9.1750			28,787.1510			28,972.3779
Total	**21.4723**	**253.4665**	**144.3950**	**0.2815**	**2.8072**	**9.9728**	**12.7800**	**1.5027**	**9.1750**	**10.6777**			**28,787.1510**			**28,972.3779**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.5051	6.6399	20.6705	0.0138	0.2608	0.0573	0.3181	0.0717	0.0525	0.1242			1,342.2926			1,342.6044
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1993	0.2392	2.7906	6.3800e-003	0.5187	3.9700e-003	0.5226	0.1376	3.6600e-003	0.1412			515.7379			516.2652
Total	**1.7044**	**6.8791**	**23.4611**	**0.0202**	**0.7794**	**0.0613**	**0.8407**	**0.2092**	**0.0562**	**0.2654**			**1,858.0305**			**1,858.8696**

3.3 Section 1 - Stripping - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	11.9809	141.4887	82.2669	0.1526		5.6203	5.6203		5.1706	5.1706			15,610.2562			15,710.6983
Total	**11.9809**	**141.4887**	**82.2669**	**0.1526**	**6.0221**	**5.6203**	**11.6423**	**3.3102**	**5.1706**	**8.4809**			**15,610.2562**			**15,710.6983**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1087	0.1305	1.5221	3.4800e-003	0.2829	2.1700e-003	0.2851	0.0750	2.0000e-003	0.0770			281.3116			281.5992
Total	**0.1087**	**0.1305**	**1.5221**	**3.4800e-003**	**0.2829**	**2.1700e-003**	**0.2851**	**0.0750**	**2.0000e-003**	**0.0770**			**281.3116**			**281.5992**

3.3 Section 1 - Stripping - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7099	0.0000	2.7099	1.4896	0.0000	1.4896			0.0000			0.0000
Off-Road	11.9809	141.4887	82.2669	0.1526		5.6203	5.6203		5.1706	5.1706			15,610.2562			15,710.6983
Total	**11.9809**	**141.4887**	**82.2669**	**0.1526**	**2.7099**	**5.6203**	**8.3302**	**1.4896**	**5.1706**	**6.6602**			**15,610.2562**			**15,710.6983**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1087	0.1305	1.5221	3.4800e-003	0.2829	2.1700e-003	0.2851	0.0750	2.0000e-003	0.0770			281.3116			281.5992
Total	**0.1087**	**0.1305**	**1.5221**	**3.4800e-003**	**0.2829**	**2.1700e-003**	**0.2851**	**0.0750**	**2.0000e-003**	**0.0770**			**281.3116**			**281.5992**

3.4 Section 2 - Degrade - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2448	0.0000	6.2448	3.3405	0.0000	3.3405			0.0000			0.0000
Off-Road	21.4723	253.4665	144.3950	0.2815		9.9728	9.9728		9.1750	9.1750			28,787.1510			28,972.3779
Total	**21.4723**	**253.4665**	**144.3950**	**0.2815**	**6.2448**	**9.9728**	**16.2176**	**3.3405**	**9.1750**	**12.5154**			**28,787.1510**			**28,972.3779**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.5969	7.0450	21.9315	0.0147	0.2767	0.0608	0.3375	0.0760	0.0557	0.1318			1,424.1766			1,424.5074
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1993	0.2392	2.7906	6.3800e-003	0.5187	3.9700e-003	0.5226	0.1376	3.6600e-003	0.1412			515.7379			516.2652
Total	**1.7962**	**7.2841**	**24.7220**	**0.0210**	**0.7954**	**0.0648**	**0.8601**	**0.2136**	**0.0594**	**0.2730**			**1,939.9145**			**1,940.7726**

3.4 Section 2 - Degrade - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8101	0.0000	2.8101	1.5032	0.0000	1.5032			0.0000			0.0000
Off-Road	21.4723	253.4665	144.3950	0.2815		9.9728	9.9728		9.1750	9.1750			28,787.1510			28,972.3779
Total	**21.4723**	**253.4665**	**144.3950**	**0.2815**	**2.8101**	**9.9728**	**12.7830**	**1.5032**	**9.1750**	**10.6782**			**28,787.1510**			**28,972.3779**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.5969	7.0450	21.9315	0.0147	0.2767	0.0608	0.3375	0.0760	0.0557	0.1318			1,424.1766			1,424.5074
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1993	0.2392	2.7906	6.3800e-003	0.5187	3.9700e-003	0.5226	0.1376	3.6600e-003	0.1412			515.7379			516.2652
Total	**1.7962**	**7.2841**	**24.7220**	**0.0210**	**0.7954**	**0.0648**	**0.8601**	**0.2136**	**0.0594**	**0.2730**			**1,939.9145**			**1,940.7726**

3.5 Section 1 - Placement - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2501	0.0000	12.2501	6.6479	0.0000	6.6479			0.0000			0.0000
Off-Road	23.7055	272.3217	154.9263	0.3020		11.2158	11.2158		10.3185	10.3185			30,881.2742			31,079.9755
Total	**23.7055**	**272.3217**	**154.9263**	**0.3020**	**12.2501**	**11.2158**	**23.4659**	**6.6479**	**10.3185**	**16.9664**			**30,881.2742**			**31,079.9755**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.3359	5.8933	18.3463	0.0123	0.3351	0.0509	0.3859	0.0890	0.0466	0.1357			1,191.3679			1,191.6446
Vendor	0.0822	0.6950	0.8568	1.9000e-003	0.0532	0.0103	0.0635	0.0152	9.4700e-003	0.0247			188.0955			188.1257
Worker	0.2464	0.2957	3.4502	7.8900e-003	0.6413	4.9100e-003	0.6462	0.1701	4.5200e-003	0.1746			637.6395			638.2915
Total	**1.6645**	**6.8840**	**22.6533**	**0.0221**	**1.0295**	**0.0661**	**1.0956**	**0.2743**	**0.0606**	**0.3349**			**2,017.1029**			**2,018.0618**

3.5 Section 1 - Placement - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5125	0.0000	5.5125	2.9915	0.0000	2.9915			0.0000			0.0000
Off-Road	23.7055	272.3217	154.9263	0.3020		11.2158	11.2158		10.3185	10.3185			30,881.2742			31,079.9755
Total	**23.7055**	**272.3217**	**154.9263**	**0.3020**	**5.5125**	**11.2158**	**16.7283**	**2.9915**	**10.3185**	**13.3100**			**30,881.2742**			**31,079.9755**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.3359	5.8933	18.3463	0.0123	0.3351	0.0509	0.3859	0.0890	0.0466	0.1357			1,191.3679			1,191.6446
Vendor	0.0822	0.6950	0.8568	1.9000e-003	0.0532	0.0103	0.0635	0.0152	9.4700e-003	0.0247			188.0955			188.1257
Worker	0.2464	0.2957	3.4502	7.8900e-003	0.6413	4.9100e-003	0.6462	0.1701	4.5200e-003	0.1746			637.6395			638.2915
Total	**1.6645**	**6.8840**	**22.6533**	**0.0221**	**1.0295**	**0.0661**	**1.0956**	**0.2743**	**0.0606**	**0.3349**			**2,017.1029**			**2,018.0618**

3.5 Section 1 - Placement - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2501	0.0000	12.2501	6.6479	0.0000	6.6479			0.0000			0.0000
Off-Road	20.7805	231.5728	137.6645	0.3021		9.3830	9.3830		8.6323	8.6323			30,394.5597			30,593.2667
Total	**20.7805**	**231.5728**	**137.6645**	**0.3021**	**12.2501**	**9.3830**	**21.6331**	**6.6479**	**8.6323**	**15.2802**			**30,394.5597**			**30,593.2667**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1458	5.4745	16.5445	0.0122	0.5228	0.0498	0.5726	0.1351	0.0457	0.1808			1,169.4013			1,169.6832
Vendor	0.0736	0.6297	0.7799	1.9000e-003	0.0532	9.5400e-003	0.0627	0.0152	8.7700e-003	0.0240			184.7920			184.8217
Worker	0.2212	0.2662	3.1012	7.8900e-003	0.6413	4.7500e-003	0.6460	0.1701	4.3900e-003	0.1745			614.0406			614.6402
Total	**1.4406**	**6.3704**	**20.4256**	**0.0220**	**1.2172**	**0.0641**	**1.2813**	**0.3204**	**0.0589**	**0.3793**			**1,968.2339**			**1,969.1450**

3.5 Section 1 - Placement - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day							lb/day			
Fugitive Dust					5.5125	0.0000	5.5125	2.9915	0.0000	2.9915			0.0000			0.0000
Off-Road	20.7805	231.5728	137.6645	0.3021		9.3830	9.3830		8.6323	8.6323			30,394.5596			30,593.2667
Total	**20.7805**	**231.5728**	**137.6645**	**0.3021**	**5.5125**	**9.3830**	**14.8955**	**2.9915**	**8.6323**	**11.6239**			**30,394.5596**			**30,593.2667**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day							lb/day			
Hauling	1.1458	5.4745	16.5445	0.0122	0.5228	0.0498	0.5726	0.1351	0.0457	0.1808			1,169.4013			1,169.6832
Vendor	0.0736	0.6297	0.7799	1.9000e-003	0.0532	9.5400e-003	0.0627	0.0152	8.7700e-003	0.0240			184.7920			184.8217
Worker	0.2212	0.2662	3.1012	7.8900e-003	0.6413	4.7500e-003	0.6460	0.1701	4.3900e-003	0.1745			614.0406			614.6402
Total	**1.4406**	**6.3704**	**20.4256**	**0.0220**	**1.2172**	**0.0641**	**1.2813**	**0.3204**	**0.0589**	**0.3793**			**1,968.2339**			**1,969.1450**

3.6 Section 2 - Stripping - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	11.9809	141.4887	82.2669	0.1526		5.6203	5.6203		5.1706	5.1706			15,610.2562			15,710.6983
Total	**11.9809**	**141.4887**	**82.2669**	**0.1526**	**6.0221**	**5.6203**	**11.6423**	**3.3102**	**5.1706**	**8.4809**			**15,610.2562**			**15,710.6983**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1087	0.1305	1.5221	3.4800e-003	0.2829	2.1700e-003	0.2851	0.0750	2.0000e-003	0.0770			281.3116			281.5992
Total	**0.1087**	**0.1305**	**1.5221**	**3.4800e-003**	**0.2829**	**2.1700e-003**	**0.2851**	**0.0750**	**2.0000e-003**	**0.0770**			**281.3116**			**281.5992**

3.6 Section 2 - Stripping - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7099	0.0000	2.7099	1.4896	0.0000	1.4896			0.0000			0.0000
Off-Road	11.9809	141.4887	82.2669	0.1526		5.6203	5.6203		5.1706	5.1706			15,610.2562			15,710.6983
Total	**11.9809**	**141.4887**	**82.2669**	**0.1526**	**2.7099**	**5.6203**	**8.3302**	**1.4896**	**5.1706**	**6.6602**			**15,610.2562**			**15,710.6983**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1087	0.1305	1.5221	3.4800e-003	0.2829	2.1700e-003	0.2851	0.0750	2.0000e-003	0.0770			281.3116			281.5992
Total	**0.1087**	**0.1305**	**1.5221**	**3.4800e-003**	**0.2829**	**2.1700e-003**	**0.2851**	**0.0750**	**2.0000e-003**	**0.0770**			**281.3116**			**281.5992**

3.7 Section 2 - Placement - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.1795	0.0000	12.1795	6.6385	0.0000	6.6385			0.0000			0.0000
Off-Road	23.0719	266.2340	150.1386	0.2958		10.7579	10.7579		9.8973	9.8973			30,244.7444			30,439.3500
Total	**23.0719**	**266.2340**	**150.1386**	**0.2958**	**12.1795**	**10.7579**	**22.9375**	**6.6385**	**9.8973**	**16.5358**			**30,244.7444**			**30,439.3500**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8826	3.8936	12.1210	8.1000e-003	0.2103	0.0336	0.2439	0.0561	0.0308	0.0869			787.1061			787.2889
Vendor	0.0822	0.6950	0.8568	1.9000e-003	0.0532	0.0103	0.0635	0.0152	9.4700e-003	0.0247			188.0955			188.1257
Worker	0.2283	0.2740	3.1965	7.3100e-003	0.5941	4.5500e-003	0.5987	0.1576	4.1900e-003	0.1618			590.7543			591.3583
Total	**1.1931**	**4.8625**	**16.1742**	**0.0173**	**0.8576**	**0.0485**	**0.9061**	**0.2289**	**0.0445**	**0.2733**			**1,565.9558**			**1,566.7729**

3.7 Section 2 - Placement - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.4808	0.0000	5.4808	2.9873	0.0000	2.9873			0.0000			0.0000
Off-Road	23.0719	266.2340	150.1386	0.2958		10.7579	10.7579		9.8973	9.8973			30,244.7443			30,439.3499
Total	**23.0719**	**266.2340**	**150.1386**	**0.2958**	**5.4808**	**10.7579**	**16.2387**	**2.9873**	**9.8973**	**12.8846**			**30,244.7443**			**30,439.3499**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8826	3.8936	12.1210	8.1000e-003	0.2103	0.0336	0.2439	0.0561	0.0308	0.0869			787.1061			787.2889
Vendor	0.0822	0.6950	0.8568	1.9000e-003	0.0532	0.0103	0.0635	0.0152	9.4700e-003	0.0247			188.0955			188.1257
Worker	0.2283	0.2740	3.1965	7.3100e-003	0.5941	4.5500e-003	0.5987	0.1576	4.1900e-003	0.1618			590.7543			591.3583
Total	**1.1931**	**4.8625**	**16.1742**	**0.0173**	**0.8576**	**0.0485**	**0.9061**	**0.2289**	**0.0445**	**0.2733**			**1,565.9558**			**1,566.7729**

3.7 Section 2 - Placement - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.1795	0.0000	12.1795	6.6385	0.0000	6.6385			0.0000			0.0000
Off-Road	20.2483	226.3133	132.9911	0.2958		9.0104	9.0104		8.2896	8.2896			29,769.0078			29,963.6252
Total	**20.2483**	**226.3133**	**132.9911**	**0.2958**	**12.1795**	**9.0104**	**21.1899**	**6.6385**	**8.2896**	**14.9280**			**29,769.0078**			**29,963.6252**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7570	3.6169	10.9305	8.0600e-003	0.3825	0.0329	0.4154	0.0984	0.0302	0.1286			772.5933			772.7795
Vendor	0.0736	0.6297	0.7799	1.9000e-003	0.0532	9.5400e-003	0.0627	0.0152	8.7700e-003	0.0240			184.7920			184.8217
Worker	0.2049	0.2467	2.8732	7.3100e-003	0.5941	4.4000e-003	0.5985	0.1576	4.0600e-003	0.1616			568.8906			569.4460
Total	**1.0355**	**4.4932**	**14.5836**	**0.0173**	**1.0298**	**0.0468**	**1.0766**	**0.2711**	**0.0430**	**0.3142**			**1,526.2759**			**1,527.0472**

3.7 Section 2 - Placement - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.4808	0.0000	5.4808	2.9873	0.0000	2.9873			0.0000			0.0000
Off-Road	20.2483	226.3133	132.9911	0.2958		9.0104	9.0104		8.2896	8.2896			29,769.0077			29,963.6252
Total	**20.2483**	**226.3133**	**132.9911**	**0.2958**	**5.4808**	**9.0104**	**14.4912**	**2.9873**	**8.2896**	**11.2769**			**29,769.0077**			**29,963.6252**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7570	3.6169	10.9305	8.0600e-003	0.3825	0.0329	0.4154	0.0984	0.0302	0.1286			772.5933			772.7795
Vendor	0.0736	0.6297	0.7799	1.9000e-003	0.0532	9.5400e-003	0.0627	0.0152	8.7700e-003	0.0240			184.7920			184.8217
Worker	0.2049	0.2467	2.8732	7.3100e-003	0.5941	4.4000e-003	0.5985	0.1576	4.0600e-003	0.1616			568.8906			569.4460
Total	**1.0355**	**4.4932**	**14.5836**	**0.0173**	**1.0298**	**0.0468**	**1.0766**	**0.2711**	**0.0430**	**0.3142**			**1,526.2759**			**1,527.0472**

3.8 Section 2 - Roadway - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7049	39.0674	23.9270	0.0440		1.7835	1.7835		1.6408	1.6408			4,431.9420			4,460.9162
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.7049**	**39.0674**	**23.9270**	**0.0440**		**1.7835**	**1.7835**		**1.6408**	**1.6408**			**4,431.9420**			**4,460.9162**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0423	0.0509	0.5929	1.5100e-003	0.1226	9.1000e-004	0.1235	0.0325	8.4000e-004	0.0334			117.3901			117.5047
Total	**0.0423**	**0.0509**	**0.5929**	**1.5100e-003**	**0.1226**	**9.1000e-004**	**0.1235**	**0.0325**	**8.4000e-004**	**0.0334**			**117.3901**			**117.5047**

3.8 Section 2 - Roadway - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7049	39.0674	23.9270	0.0440		1.7835	1.7835		1.6408	1.6408			4,431.9420			4,460.9162
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.7049**	**39.0674**	**23.9270**	**0.0440**		**1.7835**	**1.7835**		**1.6408**	**1.6408**			**4,431.9420**			**4,460.9162**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0423	0.0509	0.5929	1.5100e-003	0.1226	9.1000e-004	0.1235	0.0325	8.4000e-004	0.0334			117.3901			117.5047
Total	**0.0423**	**0.0509**	**0.5929**	**1.5100e-003**	**0.1226**	**9.1000e-004**	**0.1235**	**0.0325**	**8.4000e-004**	**0.0334**			**117.3901**			**117.5047**

3.9 Section 3 - Degrade - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1837	0.0000	6.1837	3.3323	0.0000	3.3323			0.0000			0.0000
Off-Road	18.7997	215.1651	126.3503	0.2816		8.3272	8.3272		7.6610	7.6610			28,336.8063			28,522.0606
Total	**18.7997**	**215.1651**	**126.3503**	**0.2816**	**6.1837**	**8.3272**	**14.5109**	**3.3323**	**7.6610**	**10.9933**			**28,336.8063**			**28,522.0606**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0213	4.8798	14.7473	0.0109	0.2063	0.0444	0.2507	0.0567	0.0408	0.0974			1,042.3705			1,042.6218
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1789	0.2153	2.5083	6.3800e-003	0.5187	3.8400e-003	0.5225	0.1376	3.5500e-003	0.1411			496.6505			497.1354
Total	**1.2002**	**5.0952**	**17.2556**	**0.0173**	**0.7250**	**0.0482**	**0.7732**	**0.1942**	**0.0443**	**0.2386**			**1,539.0210**			**1,539.7572**

3.9 Section 3 - Degrade - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7827	0.0000	2.7827	1.4995	0.0000	1.4995			0.0000			0.0000
Off-Road	18.7997	215.1651	126.3503	0.2816		8.3272	8.3272		7.6610	7.6610			28,336.8062			28,522.0605
Total	**18.7997**	**215.1651**	**126.3503**	**0.2816**	**2.7827**	**8.3272**	**11.1098**	**1.4995**	**7.6610**	**9.1605**			**28,336.8062**			**28,522.0605**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0213	4.8798	14.7473	0.0109	0.2063	0.0444	0.2507	0.0567	0.0408	0.0974			1,042.3705			1,042.6218
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1789	0.2153	2.5083	6.3800e-003	0.5187	3.8400e-003	0.5225	0.1376	3.5500e-003	0.1411			496.6505			497.1354
Total	**1.2002**	**5.0952**	**17.2556**	**0.0173**	**0.7250**	**0.0482**	**0.7732**	**0.1942**	**0.0443**	**0.2386**			**1,539.0210**			**1,539.7572**

3.10 Section 1 - Roadway - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7049	39.0674	23.9270	0.0440		1.7835	1.7835		1.6408	1.6408			4,431.9420			4,460.9162
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.7049**	**39.0674**	**23.9270**	**0.0440**		**1.7835**	**1.7835**		**1.6408**	**1.6408**			**4,431.9420**			**4,460.9162**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0423	0.0509	0.5929	1.5100e-003	0.1226	9.1000e-004	0.1235	0.0325	8.4000e-004	0.0334			117.3901			117.5047
Total	**0.0423**	**0.0509**	**0.5929**	**1.5100e-003**	**0.1226**	**9.1000e-004**	**0.1235**	**0.0325**	**8.4000e-004**	**0.0334**			**117.3901**			**117.5047**

3.10 Section 1 - Roadway - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7049	39.0674	23.9270	0.0440		1.7835	1.7835		1.6408	1.6408			4,431.9420			4,460.9162
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.7049**	**39.0674**	**23.9270**	**0.0440**		**1.7835**	**1.7835**		**1.6408**	**1.6408**			**4,431.9420**			**4,460.9162**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0423	0.0509	0.5929	1.5100e-003	0.1226	9.1000e-004	0.1235	0.0325	8.4000e-004	0.0334			117.3901			117.5047
Total	**0.0423**	**0.0509**	**0.5929**	**1.5100e-003**	**0.1226**	**9.1000e-004**	**0.1235**	**0.0325**	**8.4000e-004**	**0.0334**			**117.3901**			**117.5047**

3.11 Section 3 - Stripping - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	10.5019	120.4106	71.9780	0.1527		4.7087	4.7087		4.3320	4.3320			15,366.44 98			15,466.90 93
Total	**10.5019**	**120.4106**	**71.9780**	**0.1527**	**6.0221**	**4.7087**	**10.7308**	**3.3102**	**4.3320**	**7.6422**			**15,366.44 98**			**15,466.90 93**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0976	0.1175	1.3682	3.4800e-003	0.2829	2.0900e-003	0.2850	0.0750	1.9400e-003	0.0770			270.9003			271.1648
Total	**0.0976**	**0.1175**	**1.3682**	**3.4800e-003**	**0.2829**	**2.0900e-003**	**0.2850**	**0.0750**	**1.9400e-003**	**0.0770**			**270.9003**			**271.1648**

3.11 Section 3 - Stripping - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7099	0.0000	2.7099	1.4896	0.0000	1.4896			0.0000			0.0000
Off-Road	10.5019	120.4106	71.9780	0.1527		4.7087	4.7087		4.3320	4.3320			15,366.4498			15,466.9093
Total	**10.5019**	**120.4106**	**71.9780**	**0.1527**	**2.7099**	**4.7087**	**7.4186**	**1.4896**	**4.3320**	**5.8216**			**15,366.4498**			**15,466.9093**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0976	0.1175	1.3682	3.4800e-003	0.2829	2.0900e-003	0.2850	0.0750	1.9400e-003	0.0770			270.9003			271.1648
Total	**0.0976**	**0.1175**	**1.3682**	**3.4800e-003**	**0.2829**	**2.0900e-003**	**0.2850**	**0.0750**	**1.9400e-003**	**0.0770**			**270.9003**			**271.1648**

3.12 Section 4 - Degrade - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2753	0.0000	6.2753	3.3452	0.0000	3.3452			0.0000			0.0000
Off-Road	18.7997	215.1651	126.3503	0.2816		8.3272	8.3272		7.6610	7.6610			28,336.8063			28,522.0606
Total	**18.7997**	**215.1651**	**126.3503**	**0.2816**	**6.2753**	**8.3272**	**14.6024**	**3.3452**	**7.6610**	**11.0062**			**28,336.8063**			**28,522.0606**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.7035	8.1395	24.5984	0.0181	0.3441	0.0740	0.4182	0.0946	0.0680	0.1625			1,738.6688			1,739.0879
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1789	0.2153	2.5083	6.3800e-003	0.5187	3.8400e-003	0.5225	0.1376	3.5500e-003	0.1411			496.6505			497.1354
Total	**1.8824**	**8.3548**	**27.1067**	**0.0245**	**0.8628**	**0.0779**	**0.9407**	**0.2321**	**0.0715**	**0.3036**			**2,235.3193**			**2,236.2234**

3.12 Section 4 - Degrade - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8239	0.0000	2.8239	1.5054	0.0000	1.5054			0.0000			0.0000
Off-Road	18.7997	215.1651	126.3503	0.2816		8.3272	8.3272		7.6610	7.6610			28,336.8062			28,522.0605
Total	**18.7997**	**215.1651**	**126.3503**	**0.2816**	**2.8239**	**8.3272**	**11.1510**	**1.5054**	**7.6610**	**9.1663**			**28,336.8062**			**28,522.0605**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.7035	8.1395	24.5984	0.0181	0.3441	0.0740	0.4182	0.0946	0.0680	0.1625			1,738.6688			1,739.0879
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1789	0.2153	2.5083	6.3800e-003	0.5187	3.8400e-003	0.5225	0.1376	3.5500e-003	0.1411			496.6505			497.1354
Total	**1.8824**	**8.3548**	**27.1067**	**0.0245**	**0.8628**	**0.0779**	**0.9407**	**0.2321**	**0.0715**	**0.3036**			**2,235.3193**			**2,236.2234**

3.13 Section 3 - Placement - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2064	0.0000	12.2064	6.6424	0.0000	6.6424			0.0000			0.0000
Off-Road	20.2483	226.3133	132.9911	0.2958		9.0104	9.0104		8.2896	8.2896			29,769.0078			29,963.6252
Total	**20.2483**	**226.3133**	**132.9911**	**0.2958**	**12.2064**	**9.0104**	**21.2168**	**6.6424**	**8.2896**	**14.9320**			**29,769.0078**			**29,963.6252**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9905	4.7327	14.3027	0.0106	0.2883	0.0431	0.3313	0.0766	0.0395	0.1162			1,010.9448			1,011.1885
Vendor	0.0736	0.6297	0.7799	1.9000e-003	0.0532	9.5400e-003	0.0627	0.0152	8.7700e-003	0.0240			184.7920			184.8217
Worker	0.2049	0.2467	2.8732	7.3100e-003	0.5941	4.4000e-003	0.5985	0.1576	4.0600e-003	0.1616			568.8906			569.4460
Total	**1.2690**	**5.6090**	**17.9557**	**0.0198**	**0.9356**	**0.0570**	**0.9926**	**0.2494**	**0.0524**	**0.3017**			**1,764.6274**			**1,765.4562**

3.13 Section 3 - Placement - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.4929	0.0000	5.4929	2.9891	0.0000	2.9891			0.0000			0.0000
Off-Road	20.2483	226.3133	132.9911	0.2958		9.0104	9.0104		8.2896	8.2896			29,769.0077			29,963.6252
Total	**20.2483**	**226.3133**	**132.9911**	**0.2958**	**5.4929**	**9.0104**	**14.5033**	**2.9891**	**8.2896**	**11.2787**			**29,769.0077**			**29,963.6252**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9905	4.7327	14.3027	0.0106	0.2883	0.0431	0.3313	0.0766	0.0395	0.1162			1,010.9448			1,011.1885
Vendor	0.0736	0.6297	0.7799	1.9000e-003	0.0532	9.5400e-003	0.0627	0.0152	8.7700e-003	0.0240			184.7920			184.8217
Worker	0.2049	0.2467	2.8732	7.3100e-003	0.5941	4.4000e-003	0.5985	0.1576	4.0600e-003	0.1616			568.8906			569.4460
Total	**1.2690**	**5.6090**	**17.9557**	**0.0198**	**0.9356**	**0.0570**	**0.9926**	**0.2494**	**0.0524**	**0.3017**			**1,764.6274**			**1,765.4562**

3.13 Section 3 - Placement - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2064	0.0000	12.2064	6.6424	0.0000	6.6424			0.0000			0.0000
Off-Road	18.7140	201.0771	125.5889	0.2958		7.9841	7.9841		7.3454	7.3454			29,281.1361			29,475.6852
Total	**18.7140**	**201.0771**	**125.5889**	**0.2958**	**12.2064**	**7.9841**	**20.1906**	**6.6424**	**7.3454**	**13.9879**			**29,281.1361**			**29,475.6852**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9093	4.4496	13.5602	0.0105	0.4559	0.0423	0.4982	0.1178	0.0389	0.1566			993.3510			993.5969
Vendor	0.0683	0.5751	0.7343	1.9000e-003	0.0532	8.8600e-003	0.0620	0.0152	8.1500e-003	0.0233			181.6144			181.6433
Worker	0.1875	0.2247	2.6193	7.3100e-003	0.5941	4.3000e-003	0.5984	0.1576	3.9900e-003	0.1616			548.4821			548.9987
Total	**1.1651**	**5.2493**	**16.9138**	**0.0197**	**1.1032**	**0.0555**	**1.1586**	**0.2905**	**0.0510**	**0.3415**			**1,723.4474**			**1,724.2389**

3.13 Section 3 - Placement - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.4929	0.0000	5.4929	2.9891	0.0000	2.9891			0.0000			0.0000
Off-Road	18.7140	201.0771	125.5889	0.2958		7.9841	7.9841		7.3454	7.3454			29,281.1361			29,475.6851
Total	**18.7140**	**201.0771**	**125.5889**	**0.2958**	**5.4929**	**7.9841**	**13.4770**	**2.9891**	**7.3454**	**10.3345**			**29,281.1361**			**29,475.6851**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9093	4.4496	13.5602	0.0105	0.4559	0.0423	0.4982	0.1178	0.0389	0.1566			993.3510			993.5969
Vendor	0.0683	0.5751	0.7343	1.9000e-003	0.0532	8.8600e-003	0.0620	0.0152	8.1500e-003	0.0233			181.6144			181.6433
Worker	0.1875	0.2247	2.6193	7.3100e-003	0.5941	4.3000e-003	0.5984	0.1576	3.9900e-003	0.1616			548.4821			548.9987
Total	**1.1651**	**5.2493**	**16.9138**	**0.0197**	**1.1032**	**0.0555**	**1.1586**	**0.2905**	**0.0510**	**0.3415**			**1,723.4474**			**1,724.2389**

3.14 Section 5 - Degrade - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2548	0.0000	6.2548	3.3425	0.0000	3.3425			0.0000			0.0000
Off-Road	18.7997	215.1651	126.3503	0.2816		8.3272	8.3272		7.6610	7.6610			28,336.8063			28,522.0606
Total	**18.7997**	**215.1651**	**126.3503**	**0.2816**	**6.2548**	**8.3272**	**14.5820**	**3.3425**	**7.6610**	**11.0035**			**28,336.8063**			**28,522.0606**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.5919	7.6061	22.9863	0.0170	0.3216	0.0692	0.3908	0.0884	0.0635	0.1519			1,624.7223			1,625.1139
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1789	0.2153	2.5083	6.3800e-003	0.5187	3.8400e-003	0.5225	0.1376	3.5500e-003	0.1411			496.6505			497.1354
Total	**1.7708**	**7.8214**	**25.4946**	**0.0233**	**0.8402**	**0.0730**	**0.9133**	**0.2259**	**0.0671**	**0.2930**			**2,121.3728**			**2,122.2494**

3.14 Section 5 - Degrade - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8147	0.0000	2.8147	1.5041	0.0000	1.5041			0.0000			0.0000
Off-Road	18.7997	215.1651	126.3503	0.2816		8.3272	8.3272		7.6610	7.6610			28,336.80 62			28,522.06 05
Total	**18.7997**	**215.1651**	**126.3503**	**0.2816**	**2.8147**	**8.3272**	**11.1418**	**1.5041**	**7.6610**	**9.1651**			**28,336.80 62**			**28,522.06 05**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.5919	7.6061	22.9863	0.0170	0.3216	0.0692	0.3908	0.0884	0.0635	0.1519			1,624.722 3			1,625.113 9
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.1789	0.2153	2.5083	6.3800e-003	0.5187	3.8400e-003	0.5225	0.1376	3.5500e-003	0.1411			496.6505			497.1354
Total	**1.7708**	**7.8214**	**25.4946**	**0.0233**	**0.8402**	**0.0730**	**0.9133**	**0.2259**	**0.0671**	**0.2930**			**2,121.372 8**			**2,122.249 4**

3.15 Section 4 - Stripping - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	10.5019	120.4106	71.9780	0.1527		4.7087	4.7087		4.3320	4.3320			15,366.4498			15,466.9093
Total	**10.5019**	**120.4106**	**71.9780**	**0.1527**	**6.0221**	**4.7087**	**10.7308**	**3.3102**	**4.3320**	**7.6422**			**15,366.4498**			**15,466.9093**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0976	0.1175	1.3682	3.4800e-003	0.2829	2.0900e-003	0.2850	0.0750	1.9400e-003	0.0770			270.9003			271.1648
Total	**0.0976**	**0.1175**	**1.3682**	**3.4800e-003**	**0.2829**	**2.0900e-003**	**0.2850**	**0.0750**	**1.9400e-003**	**0.0770**			**270.9003**			**271.1648**

3.15 Section 4 - Stripping - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7099	0.0000	2.7099	1.4896	0.0000	1.4896			0.0000			0.0000
Off-Road	10.5019	120.4106	71.9780	0.1527		4.7087	4.7087		4.3320	4.3320			15,366.4498			15,466.9093
Total	**10.5019**	**120.4106**	**71.9780**	**0.1527**	**2.7099**	**4.7087**	**7.4186**	**1.4896**	**4.3320**	**5.8216**			**15,366.4498**			**15,466.9093**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0976	0.1175	1.3682	3.4800e-003	0.2829	2.0900e-003	0.2850	0.0750	1.9400e-003	0.0770			270.9003			271.1648
Total	**0.0976**	**0.1175**	**1.3682**	**3.4800e-003**	**0.2829**	**2.0900e-003**	**0.2850**	**0.0750**	**1.9400e-003**	**0.0770**			**270.9003**			**271.1648**

3.16 Section 4 - Placement - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.3334	0.0000	12.3334	6.6594	0.0000	6.6594			0.0000			0.0000
Off-Road	20.2483	226.3133	132.9911	0.2958		9.0104	9.0104		8.2896	8.2896			29,769.0078			29,963.6252
Total	**20.2483**	**226.3133**	**132.9911**	**0.2958**	**12.3334**	**9.0104**	**21.3438**	**6.6594**	**8.2896**	**14.9490**			**29,769.0078**			**29,963.6252**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.7169	8.2036	24.7920	0.0183	2.2189	0.0746	2.2935	0.5548	0.0685	0.6233			1,752.3554			1,752.7778
Vendor	0.0736	0.6297	0.7799	1.9000e-003	0.0532	9.5400e-003	0.0627	0.0152	8.7700e-003	0.0240			184.7920			184.8217
Worker	0.2049	0.2467	2.8732	7.3100e-003	0.5941	4.4000e-003	0.5985	0.1576	4.0600e-003	0.1616			568.8906			569.4460
Total	**1.9955**	**9.0799**	**28.4451**	**0.0275**	**2.8662**	**0.0886**	**2.9548**	**0.7276**	**0.0814**	**0.8089**			**2,506.0379**			**2,507.0455**

3.16 Section 4 - Placement - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5500	0.0000	5.5500	2.9967	0.0000	2.9967			0.0000			0.0000
Off-Road	20.2483	226.3133	132.9911	0.2958		9.0104	9.0104		8.2896	8.2896			29,769.0077			29,963.6252
Total	**20.2483**	**226.3133**	**132.9911**	**0.2958**	**5.5500**	**9.0104**	**14.5604**	**2.9967**	**8.2896**	**11.2863**			**29,769.0077**			**29,963.6252**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.7169	8.2036	24.7920	0.0183	2.2189	0.0746	2.2935	0.5548	0.0685	0.6233			1,752.3554			1,752.7778
Vendor	0.0736	0.6297	0.7799	1.9000e-003	0.0532	9.5400e-003	0.0627	0.0152	8.7700e-003	0.0240			184.7920			184.8217
Worker	0.2049	0.2467	2.8732	7.3100e-003	0.5941	4.4000e-003	0.5985	0.1576	4.0600e-003	0.1616			568.8906			569.4460
Total	**1.9955**	**9.0799**	**28.4451**	**0.0275**	**2.8662**	**0.0886**	**2.9548**	**0.7276**	**0.0814**	**0.8089**			**2,506.0379**			**2,507.0455**

3.16 Section 4 - Placement - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.3334	0.0000	12.3334	6.6594	0.0000	6.6594			0.0000			0.0000
Off-Road	18.7140	201.0771	125.5889	0.2958		7.9841	7.9841		7.3454	7.3454			29,281.1361			29,475.6852
Total	**18.7140**	**201.0771**	**125.5889**	**0.2958**	**12.3334**	**7.9841**	**20.3175**	**6.6594**	**7.3454**	**14.0048**			**29,281.1361**			**29,475.6852**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.5762	7.7129	23.5049	0.0182	0.3830	0.0733	0.4564	0.1042	0.0674	0.1716			1,721.8585			1,722.2848
Vendor	0.0683	0.5751	0.7343	1.9000e-003	0.0532	8.8600e-003	0.0620	0.0152	8.1500e-003	0.0233			181.6144			181.6433
Worker	0.1875	0.2247	2.6193	7.3100e-003	0.5941	4.3000e-003	0.5984	0.1576	3.9900e-003	0.1616			548.4821			548.9987
Total	**1.8320**	**8.5126**	**26.8586**	**0.0274**	**1.0303**	**0.0865**	**1.1168**	**0.2769**	**0.0795**	**0.3564**			**2,451.9549**			**2,452.9267**

3.16 Section 4 - Placement - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5500	0.0000	5.5500	2.9967	0.0000	2.9967			0.0000			0.0000
Off-Road	18.7140	201.0771	125.5889	0.2958		7.9841	7.9841		7.3454	7.3454			29,281.1361			29,475.6851
Total	**18.7140**	**201.0771**	**125.5889**	**0.2958**	**5.5500**	**7.9841**	**13.5342**	**2.9967**	**7.3454**	**10.3422**			**29,281.1361**			**29,475.6851**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.5762	7.7129	23.5049	0.0182	0.3830	0.0733	0.4564	0.1042	0.0674	0.1716			1,721.8585			1,722.2848
Vendor	0.0683	0.5751	0.7343	1.9000e-003	0.0532	8.8600e-003	0.0620	0.0152	8.1500e-003	0.0233			181.6144			181.6433
Worker	0.1875	0.2247	2.6193	7.3100e-003	0.5941	4.3000e-003	0.5984	0.1576	3.9900e-003	0.1616			548.4821			548.9987
Total	**1.8320**	**8.5126**	**26.8586**	**0.0274**	**1.0303**	**0.0865**	**1.1168**	**0.2769**	**0.0795**	**0.3564**			**2,451.9549**			**2,452.9267**

3.17 Section 5 - Stripping - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	9.7261	107.5352	67.4584	0.1527		4.1932	4.1932		3.8577	3.8577			15,114.7806			15,215.2059
Total	**9.7261**	**107.5352**	**67.4584**	**0.1527**	**6.0221**	**4.1932**	**10.2152**	**3.3102**	**3.8577**	**7.1679**			**15,114.7806**			**15,215.2059**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0893	0.1070	1.2473	3.4800e-003	0.2829	2.0500e-003	0.2850	0.0750	1.9000e-003	0.0769			261.1819			261.4280
Total	**0.0893**	**0.1070**	**1.2473**	**3.4800e-003**	**0.2829**	**2.0500e-003**	**0.2850**	**0.0750**	**1.9000e-003**	**0.0769**			**261.1819**			**261.4280**

3.17 Section 5 - Stripping - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7099	0.0000	2.7099	1.4896	0.0000	1.4896			0.0000			0.0000
Off-Road	9.7261	107.5352	67.4584	0.1527		4.1932	4.1932		3.8577	3.8577			15,114.7806			15,215.2059
Total	**9.7261**	**107.5352**	**67.4584**	**0.1527**	**2.7099**	**4.1932**	**6.9031**	**1.4896**	**3.8577**	**5.3473**			**15,114.7806**			**15,215.2059**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0893	0.1070	1.2473	3.4800e-003	0.2829	2.0500e-003	0.2850	0.0750	1.9000e-003	0.0769			261.1819			261.4280
Total	**0.0893**	**0.1070**	**1.2473**	**3.4800e-003**	**0.2829**	**2.0500e-003**	**0.2850**	**0.0750**	**1.9000e-003**	**0.0769**			**261.1819**			**261.4280**

3.18 Section 5 - Placement - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.2600	0.0000	12.2600	6.6487	0.0000	6.6487			0.0000			0.0000
Off-Road	18.7140	201.0771	125.5889	0.2958		7.9841	7.9841		7.3454	7.3454			29,281.1361			29,475.6852
Total	**18.7140**	**201.0771**	**125.5889**	**0.2958**	**12.2600**	**7.9841**	**20.2441**	**6.6487**	**7.3454**	**13.9941**			**29,281.1361**			**29,475.6852**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0018	4.9022	14.9393	0.0116	0.2204	0.0466	0.2670	0.0606	0.0428	0.1034			1,094.3812			1,094.6521
Vendor	0.0683	0.5751	0.7343	1.9000e-003	0.0532	8.8600e-003	0.0620	0.0152	8.1500e-003	0.0233			181.6144			181.6433
Worker	0.1875	0.2247	2.6193	7.3100e-003	0.5941	4.3000e-003	0.5984	0.1576	3.9900e-003	0.1616			548.4821			548.9987
Total	**1.2576**	**5.7019**	**18.2930**	**0.0208**	**0.8677**	**0.0598**	**0.9275**	**0.2333**	**0.0550**	**0.2883**			**1,824.4776**			**1,825.2941**

3.18 Section 5 - Placement - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day								lb/day			
Fugitive Dust					5.5170	0.0000	5.5170	2.9919	0.0000	2.9919			0.0000			0.0000
Off-Road	18.7140	201.0771	125.5889	0.2958		7.9841	7.9841		7.3454	7.3454			29,281.1361			29,475.6851
Total	**18.7140**	**201.0771**	**125.5889**	**0.2958**	**5.5170**	**7.9841**	**13.5011**	**2.9919**	**7.3454**	**10.3373**			**29,281.1361**			**29,475.6851**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					lb/day								lb/day			
Hauling	1.0018	4.9022	14.9393	0.0116	0.2204	0.0466	0.2670	0.0606	0.0428	0.1034			1,094.3812			1,094.6521
Vendor	0.0683	0.5751	0.7343	1.9000e-003	0.0532	8.8600e-003	0.0620	0.0152	8.1500e-003	0.0233			181.6144			181.6433
Worker	0.1875	0.2247	2.6193	7.3100e-003	0.5941	4.3000e-003	0.5984	0.1576	3.9900e-003	0.1616			548.4821			548.9987
Total	**1.2576**	**5.7019**	**18.2930**	**0.0208**	**0.8677**	**0.0598**	**0.9275**	**0.2333**	**0.0550**	**0.2883**			**1,824.4776**			**1,825.2941**

3.19 Section 3 - Roadway - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4345	35.1666	22.9936	0.0440		1.5998	1.5998		1.4718	1.4718			4,359.6433			4,388.6095
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.4345**	**35.1666**	**22.9936**	**0.0440**		**1.5998**	**1.5998**		**1.4718**	**1.4718**			**4,359.6433**			**4,388.6095**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0387	0.0464	0.5405	1.5100e-003	0.1226	8.9000e-004	0.1235	0.0325	8.2000e-004	0.0333			113.1788			113.2854
Total	**0.0387**	**0.0464**	**0.5405**	**1.5100e-003**	**0.1226**	**8.9000e-004**	**0.1235**	**0.0325**	**8.2000e-004**	**0.0333**			**113.1788**			**113.2854**

3.19 Section 3 - Roadway - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4345	35.1666	22.9936	0.0440		1.5998	1.5998		1.4718	1.4718			4,359.6433			4,388.6095
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.4345**	**35.1666**	**22.9936**	**0.0440**		**1.5998**	**1.5998**		**1.4718**	**1.4718**			**4,359.6433**			**4,388.6095**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0387	0.0464	0.5405	1.5100e-003	0.1226	8.9000e-004	0.1235	0.0325	8.2000e-004	0.0333			113.1788			113.2854
Total	**0.0387**	**0.0464**	**0.5405**	**1.5100e-003**	**0.1226**	**8.9000e-004**	**0.1235**	**0.0325**	**8.2000e-004**	**0.0333**			**113.1788**			**113.2854**

3.20 Pond A12 Ecotone - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.9586	0.0000	12.9586	6.7420	0.0000	6.7420			0.0000			0.0000
Off-Road	7.2892	74.8335	47.4339	0.1055		3.1491	3.1491		2.8972	2.8972			10,446.7302			10,516.1401
Total	**7.2892**	**74.8335**	**47.4339**	**0.1055**	**12.9586**	**3.1491**	**16.1078**	**6.7420**	**2.8972**	**9.6392**			**10,446.7302**			**10,516.1401**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.6339	22.6755	69.1032	0.0536	1.0197	0.2155	1.2352	0.2802	0.1981	0.4782			5,062.1659			5,063.4190
Vendor	0.0683	0.5751	0.7343	1.9000e-003	0.0532	8.8600e-003	0.0620	0.0152	8.1500e-003	0.0233			181.6144			181.6433
Worker	0.0744	0.0892	1.0394	2.9000e-003	0.2358	1.7100e-003	0.2375	0.0625	1.5800e-003	0.0641			217.6516			217.8566
Total	**4.7766**	**23.3397**	**70.8769**	**0.0584**	**1.3086**	**0.2261**	**1.5347**	**0.3579**	**0.2078**	**0.5657**			**5,461.4318**			**5,462.9189**

3.20 Pond A12 Ecotone - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.8314	0.0000	5.8314	3.0339	0.0000	3.0339			0.0000			0.0000
Off-Road	7.2892	74.8335	47.4339	0.1055		3.1491	3.1491		2.8972	2.8972			10,446.7302			10,516.1401
Total	**7.2892**	**74.8335**	**47.4339**	**0.1055**	**5.8314**	**3.1491**	**8.9805**	**3.0339**	**2.8972**	**5.9311**			**10,446.7302**			**10,516.1401**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.6339	22.6755	69.1032	0.0536	1.0197	0.2155	1.2352	0.2802	0.1981	0.4782			5,062.1659			5,063.4190
Vendor	0.0683	0.5751	0.7343	1.9000e-003	0.0532	8.8600e-003	0.0620	0.0152	8.1500e-003	0.0233			181.6144			181.6433
Worker	0.0744	0.0892	1.0394	2.9000e-003	0.2358	1.7100e-003	0.2375	0.0625	1.5800e-003	0.0641			217.6516			217.8566
Total	**4.7766**	**23.3397**	**70.8769**	**0.0584**	**1.3086**	**0.2261**	**1.5347**	**0.3579**	**0.2078**	**0.5657**			**5,461.4318**			**5,462.9189**

3.21 Section 4 - Roadway - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4345	35.1666	22.9936	0.0440		1.5998	1.5998		1.4718	1.4718			4,359.6433			4,388.6095
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.4345**	**35.1666**	**22.9936**	**0.0440**		**1.5998**	**1.5998**		**1.4718**	**1.4718**			**4,359.6433**			**4,388.6095**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0387	0.0464	0.5405	1.5100e-003	0.1226	8.9000e-004	0.1235	0.0325	8.2000e-004	0.0333			113.1788			113.2854
Total	**0.0387**	**0.0464**	**0.5405**	**1.5100e-003**	**0.1226**	**8.9000e-004**	**0.1235**	**0.0325**	**8.2000e-004**	**0.0333**			**113.1788**			**113.2854**

3.21 Section 4 - Roadway - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4345	35.1666	22.9936	0.0440		1.5998	1.5998		1.4718	1.4718			4,359.643 3			4,388.609 5
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.4345**	**35.1666**	**22.9936**	**0.0440**		**1.5998**	**1.5998**		**1.4718**	**1.4718**			**4,359.643 3**			**4,388.609 5**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0387	0.0464	0.5405	1.5100e-003	0.1226	8.9000e-004	0.1235	0.0325	8.2000e-004	0.0333			113.1788			113.2854
Total	**0.0387**	**0.0464**	**0.5405**	**1.5100e-003**	**0.1226**	**8.9000e-004**	**0.1235**	**0.0325**	**8.2000e-004**	**0.0333**			**113.1788**			**113.2854**

3.22 Section 5 - Roadway - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4345	35.1666	22.9936	0.0440		1.5998	1.5998		1.4718	1.4718			4,359.6433			4,388.6095
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.4345**	**35.1666**	**22.9936**	**0.0440**		**1.5998**	**1.5998**		**1.4718**	**1.4718**			**4,359.6433**			**4,388.6095**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0387	0.0464	0.5405	1.5100e-003	0.1226	8.9000e-004	0.1235	0.0325	8.2000e-004	0.0333			113.1788			113.2854
Total	**0.0387**	**0.0464**	**0.5405**	**1.5100e-003**	**0.1226**	**8.9000e-004**	**0.1235**	**0.0325**	**8.2000e-004**	**0.0333**			**113.1788**			**113.2854**

3.22 Section 5 - Roadway - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4345	35.1666	22.9936	0.0440		1.5998	1.5998		1.4718	1.4718			4,359.6433			4,388.6095
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.4345**	**35.1666**	**22.9936**	**0.0440**		**1.5998**	**1.5998**		**1.4718**	**1.4718**			**4,359.6433**			**4,388.6095**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker	0.0387	0.0464	0.5405	1.5100e-003	0.1226	8.9000e-004	0.1235	0.0325	8.2000e-004	0.0333			113.1788			113.2854
Total	**0.0387**	**0.0464**	**0.5405**	**1.5100e-003**	**0.1226**	**8.9000e-004**	**0.1235**	**0.0325**	**8.2000e-004**	**0.0333**			**113.1788**			**113.2854**

3.23 Pond A18 Ecotone Phase 1 - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					13.1564	0.0000	13.1564	6.7703	0.0000	6.7703			0.0000			0.0000
Off-Road	9.2701	71.6372	65.2657	0.2109		2.8565	2.8565		2.6280	2.6280			20,410.5113			20,549.1359
Total	**9.2701**	**71.6372**	**65.2657**	**0.2109**	**13.1564**	**2.8565**	**16.0129**	**6.7703**	**2.6280**	**9.3983**			**20,410.5113**			**20,549.1359**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.7781	18.9634	79.2736	0.0694	1.3334	0.2614	1.5948	0.3664	0.2405	0.6069			6,425.7107			6,427.3881
Vendor	0.0547	0.3010	0.6178	1.8800e-003	0.0532	6.8500e-003	0.0601	0.0152	6.3100e-003	0.0215			176.6359			176.6623
Worker	0.1057	0.1211	1.4283	5.2200e-003	0.4244	3.0100e-003	0.4274	0.1126	2.7900e-003	0.1154			357.9983			358.2992
Total	**4.9384**	**19.3856**	**81.3197**	**0.0765**	**1.8109**	**0.2713**	**2.0822**	**0.4941**	**0.2496**	**0.7438**			**6,960.3449**			**6,962.3496**

3.23 Pond A18 Ecotone Phase 1 - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.9204	0.0000	5.9204	3.0466	0.0000	3.0466			0.0000			0.0000
Off-Road	9.2701	71.6372	65.2657	0.2109		2.8565	2.8565		2.6280	2.6280			20,410.5112			20,549.1359
Total	**9.2701**	**71.6372**	**65.2657**	**0.2109**	**5.9204**	**2.8565**	**8.7769**	**3.0466**	**2.6280**	**5.6746**			**20,410.5112**			**20,549.1359**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.7781	18.9634	79.2736	0.0694	1.3334	0.2614	1.5948	0.3664	0.2405	0.6069			6,425.7107			6,427.3881
Vendor	0.0547	0.3010	0.6178	1.8800e-003	0.0532	6.8500e-003	0.0601	0.0152	6.3100e-003	0.0215			176.6359			176.6623
Worker	0.1057	0.1211	1.4283	5.2200e-003	0.4244	3.0100e-003	0.4274	0.1126	2.7900e-003	0.1154			357.9983			358.2992
Total	**4.9384**	**19.3856**	**81.3197**	**0.0765**	**1.8109**	**0.2713**	**2.0822**	**0.4941**	**0.2496**	**0.7438**			**6,960.3449**			**6,962.3496**

3.24 Pond A18 Ecotone Phase 2 - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.6408	0.0000	12.6408	6.6950	0.0000	6.6950			0.0000			0.0000
Off-Road	9.0259	66.4130	63.8853	0.2109		2.6282	2.6282		2.4179	2.4179			20,416.7601			20,555.4272
Total	**9.0259**	**66.4130**	**63.8853**	**0.2109**	**12.6408**	**2.6282**	**15.2689**	**6.6950**	**2.4179**	**9.1129**			**20,416.7601**			**20,555.4272**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.5677	6.3664	26.4086	0.0235	0.4515	0.0889	0.5404	0.1241	0.0818	0.2059			2,176.3042			2,176.8736
Vendor	0.0533	0.2985	0.6024	1.8800e-003	0.0532	6.8900e-003	0.0601	0.0152	6.3400e-003	0.0215			176.7040			176.7305
Worker	0.1005	0.1144	1.3526	5.2200e-003	0.4244	3.0100e-003	0.4274	0.1126	2.7900e-003	0.1154			353.0932			353.3824
Total	**1.7215**	**6.7792**	**28.3636**	**0.0306**	**0.9291**	**0.0988**	**1.0279**	**0.2518**	**0.0909**	**0.3428**			**2,706.1014**			**2,706.9866**

3.24 Pond A18 Ecotone Phase 2 - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.6883	0.0000	5.6883	3.0127	0.0000	3.0127			0.0000			0.0000
Off-Road	9.0259	66.4130	63.8853	0.2109		2.6282	2.6282		2.4179	2.4179			20,416.7601			20,555.4271
Total	**9.0259**	**66.4130**	**63.8853**	**0.2109**	**5.6883**	**2.6282**	**8.3165**	**3.0127**	**2.4179**	**5.4307**			**20,416.7601**			**20,555.4271**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.5677	6.3664	26.4086	0.0235	0.4515	0.0889	0.5404	0.1241	0.0818	0.2059			2,176.3042			2,176.8736
Vendor	0.0533	0.2985	0.6024	1.8800e-003	0.0532	6.8900e-003	0.0601	0.0152	6.3400e-003	0.0215			176.7040			176.7305
Worker	0.1005	0.1144	1.3526	5.2200e-003	0.4244	3.0100e-003	0.4274	0.1126	2.7900e-003	0.1154			353.0932			353.3824
Total	**1.7215**	**6.7792**	**28.3636**	**0.0306**	**0.9291**	**0.0988**	**1.0279**	**0.2518**	**0.0909**	**0.3428**			**2,706.1014**			**2,706.9866**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546690	0.063179	0.174273	0.121979	0.033815	0.004830	0.015501	0.025302	0.002100	0.003252	0.006757	0.000658	0.001666

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**			**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**			**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.2000e-004			2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.2000e-004			2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.2000e-004			2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**2.2000e-004**			**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.2000e-004			2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**2.2000e-004**			**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Appendix A6

2010 Census Data – Racial and Ethnic Distribution of Study Area

Appendix A6. Minority Populations in Blocks Partially or Wholly within the Shoreline Phase I Study Area

Block in Block Group 1 of Census Tract 5046.02	Total Population	Percentage of Block Population[a]								
		White Alone (not Hispanic or Latino)	White and Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian	Native Hawaiian or Other Pacific Islander	Some Other Race	Two or More Races	Total Minorities
Block 1000	11	36.4%	45.5%	0.0%	0.0%	0.0%	0.0%	0.0%	18.2%	63.6%
Block 1024	9	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Block 1026	9	55.6%	0.0%	0.0%	0.0%	22.2%	0.0%	22.2%	0.0%	44.4%
Block 1027	3	33.3%	66.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	66.7%
Block 1037	10	10.0%	30.0%	0.0%	30.0%	0.0%	0.0%	30.0%	0.0%	90.0%
Block 1038	28	21.4%	21.4%	3.6%	0.0%	0.0%	0.0%	53.6%	0.0%	78.6%
Block 1039	19	57.9%	10.5%	0.0%	0.0%	0.0%	0.0%	0.0%	31.6%	42.1%
Block 1040	4	0.0%	0.0%	25.0%	0.0%	25.0%	0.0%	50.0%	0.0%	100.0%
Block 1041	143	3.5%	37.1%	1.4%	1.4%	11.2%	0.0%	44.8%	0.7%	96.5%
Block 1042	180	5.0%	36.7%	0.6%	4.4%	2.2%	0.0%	47.2%	3.9%	95.0%
Block 1043	124	21.8%	6.5%	0.0%	0.0%	16.1%	0.0%	55.6%	0.0%	78.2%
Block 1044	134	9.7%	21.6%	0.0%	1.5%	9.7%	0.0%	52.2%	5.2%	90.3%

Block in Block Group 1 of Census Tract 5046.02	Total Population	Percentage of Block Population[a]								
		White Alone (not Hispanic or Latino)	White and Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian	Native Hawaiian or Other Pacific Islander	Some Other Race	Two or More Races	Total Minorities
Block 1045	116	10.3%	19.0%	1.7%	0.0%	5.2%	2.6%	54.3%	6.9%	89.7%
Block 1048	48	0.0%	31.3%	2.1%	4.2%	0.0%	0.0%	56.3%	6.3%	100.0%
Block 1049	26	26.9%	11.5%	0.0%	7.7%	3.8%	0.0%	50.0%	0.0%	73.1%
Block 1050	210	1.0%	35.2%	3.8%	0.5%	3.8%	0.0%	50.5%	5.2%	99.0%
Block 1051	115	10.4%	33.0%	0.0%	0.0%	6.1%	0.0%	45.2%	5.2%	89.6%
Block 1052	93	23.7%	22.6%	1.1%	0.0%	2.2%	0.0%	45.2%	5.4%	76.3%
Block 1053	135	4.4%	37.0%	0.0%	1.5%	2.2%	0.0%	54.8%	0.0%	95.6%
Block 1054	6	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	83.3%	0.0%	100.0%
Block 1056	54	16.7%	18.5%	0.0%	0.0%	22.2%	5.6%	37.0%	0.0%	83.3%
Block 1058	128	11.7%	1.6%	5.5%	0.0%	68.8%	0.0%	7.0%	5.5%	88.3%
Block 1060	33	15.2%	0.0%	0.0%	0.0%	81.8%	0.0%	0.0%	3.0%	84.8%
Block 1061	75	22.7%	0.0%	5.3%	0.0%	69.3%	0.0%	0.0%	2.7%	77.3%
Block 1062	46	2.2%	6.5%	0.0%	0.0%	73.9%	0.0%	0.0%	17.4%	97.8%

Block in Block Group 1 of Census Tract 5046.02	Total Population	Percentage of Block Population[a]								
		White Alone (not Hispanic or Latino)	White and Hispanic or Latino	Black or African American	American Indian or Alaska Native	Asian	Native Hawaiian or Other Pacific Islander	Some Other Race	Two or More Races	Total Minorities
Block 1063	35	22.9%	8.6%	0.0%	0.0%	60.0%	0.0%	2.9%	5.7%	77.1%
Block 1064	11	63.6%	0.0%	0.0%	0.0%	0.0%	0.0%	36.4%	0.0%	36.4%
Block 1199	19	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
	1824	11.7%	23.8%	1.5%	1.2%	17.4%	0.3%	39.8%	4.2%	88.3%

Source: U.S. Census Bureau 2010 (Summary File 1)

Notes:

[a] The Census Bureau considers people of Hispanic or Latino origin separately from the racial categories. These percentages for Black or African American, American Indian or Alaskan Native, Asian, Native Hawaiian or Other Pacific Islander, Some Other Race, and Two or More Races include people of Hispanic or Latino origin. The categories with larger proportions of people of Hispanic or Latino Origin are American Indian and Alaskan Native (73% of the racial group), Some Other Race (99% of the racial group), and Two or More Races (63% of the racial group).

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Appendix A7

2010 Census Data – 5-Year Income Estimates for Study Area

Appendix A7. American Community Survey 5-Year Estimates for Income, Poverty, and Race/Ethnicity for the Shoreline Phase I Study Area

	Census Tract 5046.02, Santa Clara County, California						Census Tract 5050.09, Santa Clara County, California					
	Total		Below Poverty Level		Percentage Below Poverty Level		Total		Below Poverty Level		Percentage Below Poverty Level	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Median Household Income (dollars)	52,202	±35,786	NA	NA	NA	NA	75,082	±12,306	NA	NA	NA	NA
Population for whom poverty status is determined	1,471	±279	230	±150	15.6%	±10.1	6,026	±584	646	±243	10.7%	±4.1
By Age												
Under 18 years	286	±145	32	±36	11.2%	±13.3	1,523	±315	152	±129	10.0%	±8.5
Related children under 18 years	286	±145	32	±36	11.2%	±13.3	1,523	±315	152	±129	10.0%	±8.5
18 to 64 years	981	±207	198	±133	20.2%	±12.5	4,214	±412	467	±160	11.1%	±3.6
65 years and over	204	±108	0	±132	0.0%	±17.7	289	±121	27	±30	9.3%	±10.2
By Race and Ethnicity												
One race	1,424	±274	230	±150	16.2%	±10.4	5,786	±602	601	±238	10.4%	±4.1
White	674	±275	87	±63	12.9%	±10.7	2,652	±455	410	±235	15.5%	±7.9
Black or African American	23	±37	23	±37	100.0%	±68.6	675	±280	89	±116	13.2%	±17.9
American Indian or Alaska Native	0	±132	0	±132	—	**	0	±132	0	±132	—	**
Asian	146	±113	0	±132	0.0%	±23.6	1,551	±272	54	±61	3.5%	±3.9
Native Hawaiian or Other Pacific Islander	0	±132	0	±132	—	**	10	±18	0	±132	0.0%	±100.0
Some other race	581	±273	120	±135	20.7%	±19.8	898	±556	48	±76	5.3%	±6.7
Two or more races	47	±58	0	±132	0.0%	±48.0	240	±140	45	±54	18.8%	±22.3
Hispanic or Latino origin (of any race)	1,026	±335	170	±140	16.6%	±12.7	1,595	±564	215	±135	13.5%	±7.4
White alone, not Hispanic or Latino	213	±106	37	±39	17.4%	±17.8	2,025	±318	261	±214	12.9%	±9.9

Source: U.S. Census Bureau, 2006–2010 American Community Survey

Explanation of Symbols:

1. A '**' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error.

	Census Tract 5046.02, Santa Clara County, California						Census Tract 5050.09, Santa Clara County, California					
	Total		Below Poverty Level		Percentage Below Poverty Level		Total		Below Poverty Level		Percentage Below Poverty Level	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error

A statistical test is not appropriate.

2. A '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. A '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. A '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. A '***' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. A '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.
9. NA means not applicable to the subject.

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90-percent margin of error. The margin of error can be interpreted roughly as providing a 90-percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error. The effect of nonsampling error is not represented in these tables.

Appendix A8

Coastal Zone Management Act - Consistency Determination

South San Francisco Bay Shoreline Phase I Feasibility Study and Environmental Impact Statement/Environmental Impact Report

Coastal Zone Management Act
Federal Consistency Determination

1.0 Introduction

This consistency determination is being prepared pursuant to the federal Coastal Zone Management Act of 1972 (CZMA). The CZMA encourages states and tribes to preserve, protect, develop, and, where possible, restore or enhance valuable natural coastal resources such as wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs and the fish and wildlife using those habitats. Any federal agency activity within or outside a coastal zone that affects any land or water use or natural resource of the coastal zone must be carried out in a manner that is consistent to the maximum extent practicable with enforceable policies of approved state management programs.

Section 304(1) of the CZMA requires exclusion from the coastal zone of “lands the use of which is by law subject solely to the discretion of or which is held in trust by the Federal Government, its officers or agents.” The Attorney General of the United States and the Office of Coastal Zone Management have interpreted this clause to require exclusion of “those lands owned, leased, held in trust or whose use is otherwise by law subject solely to the discretion of the Federal Government, its officers or agents.”

Much of the study area is within an area that would be part of the coastal zone but is federally owned land administered by the USFWS. Any activities or projects conducted within excluded lands that may have an effect on land use, water use, or the natural resources of the coastal zone are subject to the consistency provisions of the CZMA [Section 307(c)(1)(A)]. The Shoreline Phase I Study Area is subject to these consistency provisions.

In the study area, the San Francisco Bay Conservation and Development Commission (BCDC) implements the provisions of the CZMA. The McAteer-Petris Act (California Government Code Sections 66600–66694) is the California State law that establishes the BCDC as a state agency; prescribes the BCDC’s powers, responsibilities, and structure; and describes the broad policies that the BCDC must use to determine whether permits can be issued for activities in and along the shoreline of San Francisco Bay.

The BCDC first adopted the San Francisco Bay Plan in 1969. The plan includes general goals for management of the Bay Area, permitting guidance, and policies against which BCDC weighs a proposed action during the permit process. Non-Federal land in the study area and non-Federal actions that are part of the project are subject to CZMA permitting through the BCDC's process. The Shoreline Phase I Project is within the area covered by Map 7 of the San Francisco Bay Plan (Figure 3).

2.0 Box 1: Property Ownership and Applicant Information

The South San Francisco Bay Shoreline Phase I project is a partnership between the United States Army Corps of Engineers (USACE), United States Fish and Wildlife Service (USFWS), California Coastal Conservancy (Conservancy), and the Santa Clara Valley Water District (SCVWD). Much of the property is owned and operated by the USFWS as part of the Alviso Pond Complex. The City of San José owns and operates Pond A18. The Alviso Pond Complex and Pond A18 are the areas where construction would occur. The USACE will be responsible for all construction activities associated with the project and are the applicant. The USFWS and SCVWD will be responsible for future maintenance of the project.

2.1 Box 1 (a): Project Applicant

	Applicant	Applicant's Representative
Name/Title	United States Army Corps of Engineers, San Francisco District	William DeJager
Address	1455 Market Street	
City, State, Zip	San Francisco, California, 94117	
Telephone	(415) 503-6866	
Fax		
Email	William.R.DeJager@usace.army.mil	

2.2 Box 1 (c): Property Owners

Ponds A9-A15 Ownership

	Property Owner	Owner's Representative
Name/Title	U.S. Fish and Wildlife Service/ Don Edwards San Francisco Bay National Wildlife Refuge	Anne Morkill
Address	1 Marshlands Rd	
City, State, Zip	Fremont, CA 94555	
Telephone	(510) 792-0222	
Fax		
Email		

Pond A18 Ownership

	Property Owner	Owner's Representative
Name/Title	City of San José	
Address	200 E. Santa Clara St	
City, State, Zip	San José, CA 95113	
Telephone	(408) 535-3500	
Fax		
Email		

3.0 Box 2: Total Project and Site Information

This section provides the information requested in Box 2 of the consistency determination application. Subsections (a) and (b) of Box 2 request the street address of the project. The proposed project spans a large area of several thousand acres and is owned by the USFWS and City of San José. As such, an address is not provided. Instead, a brief description of the project location is provided.

3.1 Box 2 (a)(b): Project Location

The Shoreline Phase I project area is located in the community of Alviso, part of the City of San José, Santa Clara County, California (Figure 3). The proposed levee system is bounded on the southwest by Alviso Slough and to the north by Coyote Creek (Figure 1). The USFWS owns and manages the 8,000-acre (ac) Alviso pond complex, within which are located New Chicago Marsh and 2,100 acres of ponds included in the current Shoreline Phase I project area. Pond A18 (about 856 acres), owned by the City of San José, is also included in the project area.

3.2 Box 2 (c): Assessor's Parcel Numbers

015-25-012	015-31-008	015-33-053	15-33-041
015-25-023	015-32-018	015-33-054	15-33-042
015-25-025	015-32-019	015-38-005	15-33-044
015-25-028	015-32-020	015-47-005	15-33-045
015-26-001	015-32-029	022-30-050	15-33-046
015-26-015	015-32-030	Public Road	15-33-053
015-26-023	015-32-031	015-32-042	342-05-062
015-26-027	015-32-032	015-33-016	342-63-004
015-28-007	015-32-033	15-33-037	189-03-019
015-29-003	015-32-034	15-33-038	
015-29-004	015-32-043	15-33-039	
015-30-071	015-33-043	15-33-040	

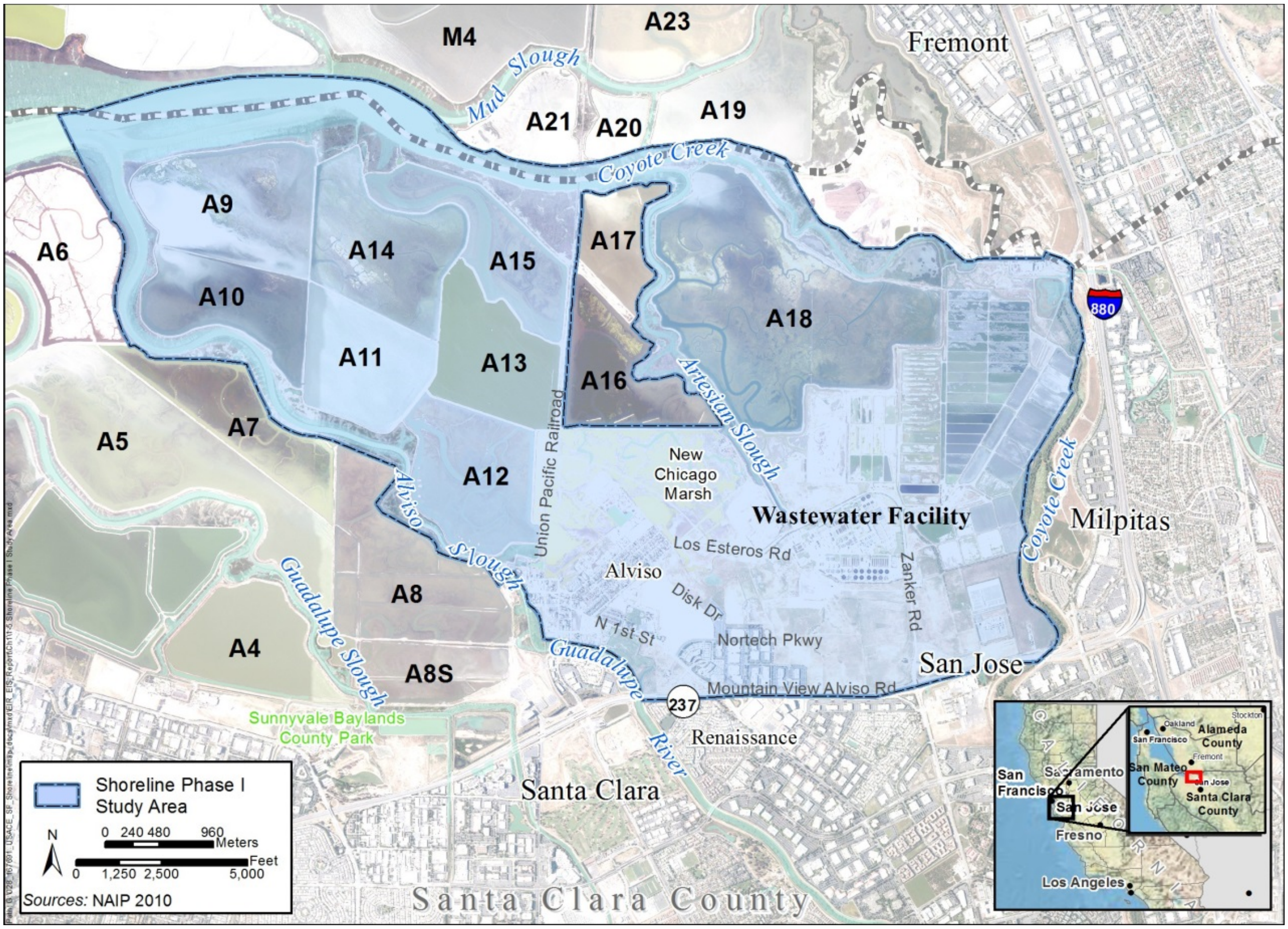

Figure 1: South Bay Shoreline Phase I Study Area

3.3 Box 2 (d): Latitude and Longitude

The approximate center point of the project site is 37°26’59” north, 121°57’20” west.

3.4 Box 2 (e): Previous BCDC Number(s) for Work at this Site

The only consistency determination relevant to the proposed project is: South Bay Salt Pond Restoration Project (SBSPRP), Phase I.

- #CN 10-03—Bay Conservation and Development Commission (October 17, 2008): http://www.southbayrestoration.org/documents/permit-related/

3.5 Box 2 (f): Project Name

South San Francisco Bay Shoreline Phase I.

3.6 Box 2 (g): Brief Overview of the Project

The United States Army Corps of Engineers (USACE), San Francisco District, is proposing to: construct/raise flood risk management levees bayward of the community of Alviso and the adjacent Wastewater Facility (i.e., south of Ponds A12, A13, A16, and A18); fill areas immediately bayward of the constructed levees to create ecotones which will facilitate tidal marsh restoration of Ponds A9 through 15 and A18 and create transitional habitat; breach existing outer levees to restore tidal habitats in existing salt ponds; and provide recreation features in line with the project objectives. The objectives of the project are to:

- Reduce the risk to public health, human safety, and the environment due to tidal flooding along the South Bay shoreline in Santa Clara County.
- Reduce potential economic damages due to tidal flooding in areas near the South Bay shoreline in Santa Clara County.
- Increase contiguous tidal marsh to restore ecological function and habitat quantity, quality, and connectivity in the study area. The actions would increase habitat size for native, resident plant and animal species, including special-status species such as the Central California Coast steelhead, California Ridgway's rail, and salt marsh harvest mouse.
- Provide opportunities for public access, environmental education, and recreation in the study area.

The flood risk management levee would provide tidal flood risk management benefits to a population of about 6,000 residents and people working in the area and would provide protection from a 1-percent annual chance of exceedance (ACE) flood through the end of the 50-year period of analysis, accounting for sea level rise under the USACE high scenario. Additionally, this project would tie into the surrounding flood risk management projects, which also provide protection from a 1-percent ACE flood.

The project would also create approximately 2,900 acres of tidal marsh and transitional ecotone habitat in the Alviso Pond Complex and City of San José-owned Pond A18. The restored habitat would contribute to the Don Edwards San Francisco Bay Wildlife Refuge and benefit salt marsh harvest mouse and California Ridgeway's rail, which reside almost exclusively on tidal marsh habitat. Finally, the project would provide recreation opportunities in the project area, which would tie into surrounding recreational areas, including the Bay Trail and refuge.

The proposed project is closely interrelated, and in some cases overlaps, with the ongoing implementation of the South Bay Salt Pond Restoration Project (SBSPRP). The planning process for the Shoreline Phase I Study is being coordinated with the SBSPRP actions, as both efforts have similar flood risk management, ecosystem restoration, and recreation objectives.

3.7 Box 2 (h): Date Work is Expected to Begin and End

Construction of the project is dependent on Congressional construction authorization and appropriations. However, it is expected that construction of the project will begin in 2018, with levees being completed in 2021. Restoration activities will be ongoing through 2031 and monitoring and adaptive management through 2041.

3.8 Box 2 (i): Total Project Cost

The estimated total cost of the project is: $174,000,000.

3.9 Box 2 (j): Length of Shoreline on Project Site

Jurisdictional shoreline band in the project area is conservatively estimated to be 116,900 linear feet and includes: all shorelines east of Alviso Slough (approximately 33,400 linear feet), south of Coyote Creek (approximately 10,800 linear feet), south of Coyote Slough (approximately 16,500 linear feet), east of Artesian Slough (approximately 26,300 linear feet), and west of Artesian Slough (approximately 29,900 linear feet). The portion of Coyote Creek upstream of the confluence with Coyote Slough (near the western most point of Newby Island) is outside of the project area and disconnected by an existing levee that will not be affected by the project.

3.10 Box 2 (k): Length of Shoreline at Adjacent Property Owned or Controlled by the Applicant

Much of the adjacent property is owned by the USFWS and has shoreline bands along the Bay and sloughs. It is expected that more than 80,000 linear feet of shoreline band encompasses the wildlife refuge immediate north of the project site and Coyote Creek immediately south.

3.11 Box 2 (l – q): Approximate Size of the Project Site within BCDC Jurisdiction

This section provides the information requested by Box 2, sections l through Q, of the consistency determination application. The BCDC's regulatory jurisdiction is defined in section 66610 of the McAteer-Petris Act and Part I of the Bay Plan. BCDC jurisdiction includes five separate categories, including: San Francisco Bay, shoreline band, salt ponds, managed wetlands, and certain waterways. All five areas are within the boundaries of the project area. BCDC's jurisdiction areas are defined below. In addition, the types of existing habitat and associated area within each jurisdictional type are provided. The existing habitat includes the project area and a biological buffer (Figure 2)—the red line indicates where the actual footprint of the project area. Habitat mapped outside of the project area is included to account for potential impacts to biological resources outside of the project area and to provide a conservative estimate of BCDC's jurisdiction in the project area.

- **San Francisco Bay**. San Francisco Bay includes areas that are subject to tidal action from the south end of the Bay to the Golden Gate (Point Bonita-Point Lobos) and to the Sacramento River line (a line between Stake Point and Simmons Point, extended northeasterly to the mouth of Marshall Cut), including all sloughs, and specifically, the marshlands lying between mean high tide and 5 feet above mean sea level; tidelands (land lying between mean high tide and mean low tide); and submerged lands (land lying below mean low tide).

  The very northwestern portion of the project is adjacent to the South Bay. With the exception of the southern portion of the project between Santa Clara and Milpitas which is adjacent to developed area, the project area is entirely surrounded by creeks and sloughs. The project area is bordered by Alviso Slough to the west, Coyote Creek (to the confluence of Coyote Slough) to the north and Coyote Slough to the northeast. Additionally, Artesian Slough runs through the project area between Pond A18 and Ponds A16 and A17. Coyote Creek, Alviso Slough, and Artesian Slough area considered San Francisco Bay jurisdictional habitat; together, these areas comprise approximately 357.8 acres.

  The project area also includes non-managed (i.e., non-diked) wetlands and mudflats, including tidal salt marsh (332.0 acres), brackish marsh (432.2), freshwater marsh adjacent to sloughs (93.2 acres), and mudflats (220.4 acres). In total, this habitat comprises approximately 857.4 acres of managed wetlands and 220.4 acres of mudflat.

  In total, the project area comprises approximately 1,435.6 acres of San Francisco Bay jurisdiction.

- **Shoreline band**. The shore band consists of all territory located between the shoreline of San Francisco Bay (as defined in San Francisco Bay, above) and a line 100 feet landward of and parallel with that line, but excluding any portions of such territory which are included in San Francisco Bay, salt ponds, and managed wetlands.

  Much of the project area is considered San Francisco Bay, salt ponds, or managed wetlands. As defined in the McAteer-Petris Act, these jurisdictional habitats are not considered shoreline bands. Most of the shoreline adjacent to Alviso Slough, Artesian Slough, and Coyote Creek (to the western most point of Newby Island / confluence with Coyote Slough) and Coyote Slough, as well as the tidally-influenced marshes adjacent to these areas, have existing berms which prevent tides from entering the salt ponds and managed wetlands. Thus, the shoreline in these areas is limited to the tops of berms between the tidally-influenced San Francisco Bay jurisdictional areas and the salt ponds and managed wetlands.

  Jurisdictional shoreline band in the project area is conservatively estimated to be 116,900 linear feet and includes: all shorelines east of Alviso Slough (approximately 33,400 linear feet), south of Coyote Creek (approximately 10,800 linear feet), south of Coyote Slough (approximately 16,500 linear feet), east of Artesian Slough (approximately 26,300 linear feet), and west of Artesian Slough (approximately 29,900 linear feet). The portion of Coyote Creek upstream of the confluence with Coyote Slough (near the western most point of Newby Island) is outside of the project area and disconnected by an existing levee that will not be affected by the project.

While a conservative length of shoreline habitat is provided in this analysis, the area of shoreline habitat is yet to be determined. The USACE is in the process of determining the area of shoreline band in the project area.

- **Salt ponds**. Salt ponds consist of all areas which have been diked off from the Bay and were used during the 3 years immediately prior to November 11, 1969, for the solar evaporation of Bay water in the course of salt production.

  Salt ponds include the batch ponds (826.1 acres) and circulation ponds (2,061.7 acres) in the project area. Ponds A9 – A16 and A18 are all within BCDC's salt pond jurisdiction and comprise approximately 2,887.8 acres of salt pond jurisdictional habitat.

- **Managed wetlands**. Managed wetlands consist of all areas which have been diked off from the Bay and have been maintained during the three years immediately prior to November 11, 1969, as a duck hunting preserve, game refuge, or for agriculture.

  Several areas in the project site are managed wetlands, including the New Chicago Marsh. Managed wetland habitat in the project area includes non-tidal salt marsh (85.4 acres), tidal, muted tidal / diked marsh (340.1 acres), and seasonal wetlands (26.2 acres). The project area consists of approximately 451.7 acres of managed wetlands in the project area.

- **Certain waterways**. Certain waterways consist of areas that are subject to tidal action, including submerged lands, tidelands, and marshlands up to 5 feet mean sea level, on, or tributary to, the listed portions of eight identified waters ways, including Coyote Creek (and branches) in Alameda and Santa Clara County, to the eastern most point of Newby Island. The shorelines of certain waterways, up to 100 feet inland, are also considered shoreline band jurisdiction.

  Certain waterways in the project area include Coyote Creek, from South San Francisco Bay to the western most point of Newby Island, and the branches, including: Alviso Slough, Artesian Slough, and Coyote Slough—all three of which are branches off Coyote Creek.

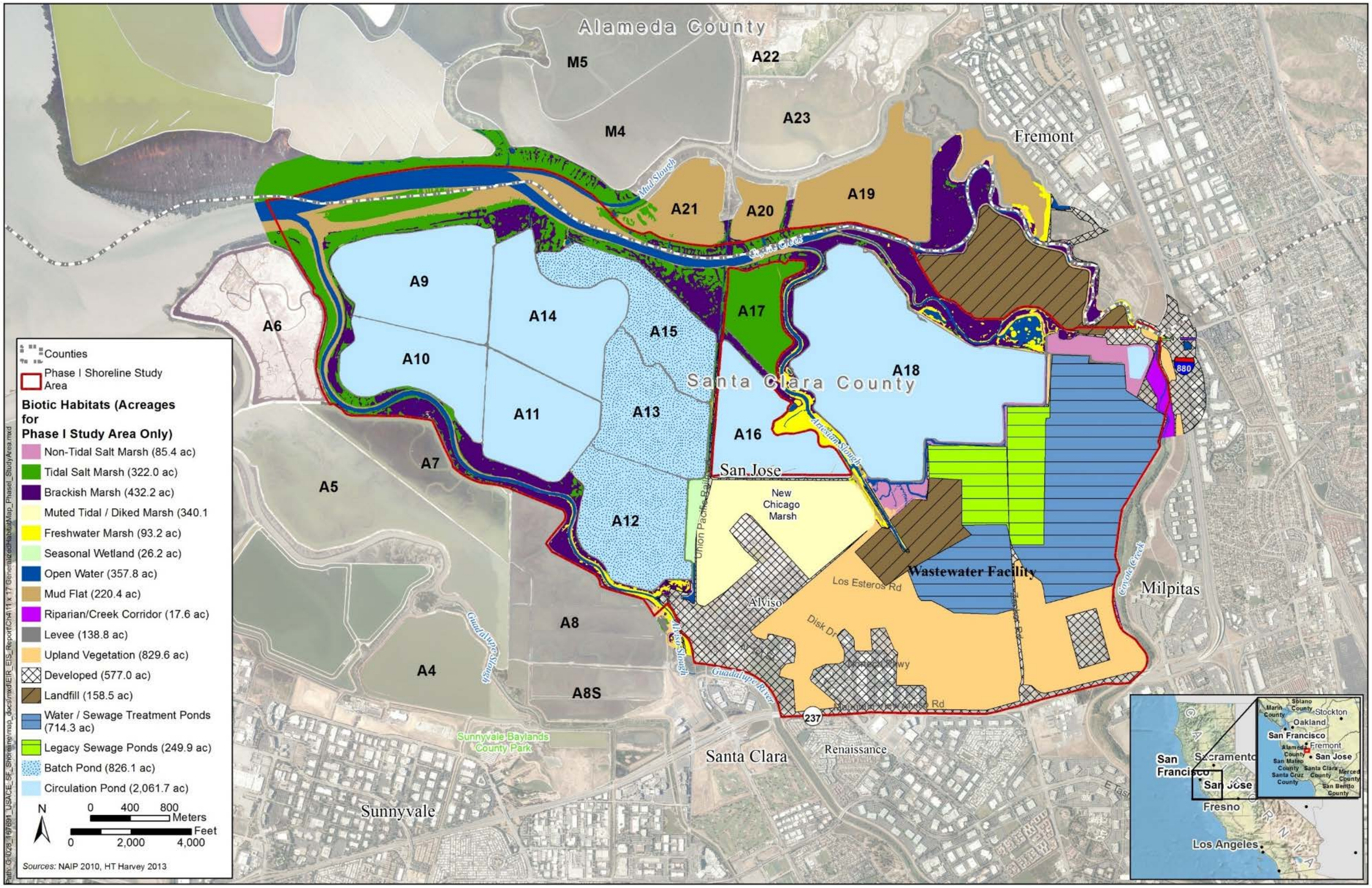

Figure 2: Shoreline Phase I Study Area Habitat

The Bay Plan also identifies priority uses for the Bay and the surrounding areas. As shown on Figure 3, the priority uses of most of the South Bay area is wildlife refuge. Specifically, the Bay Plan calls for approximately 9,600 acres of salt ponds and adjacent tidal habitat to be restored and included to the Don Edwards San Francisco Bay National Wildlife Refuge (hereinafter, refuge). The Bay Plan further states that "[t]he proposed restoration would be in accord with the Bay Plan policies and provides excellent wildlife recreation opportunities." Additionally, the Bay Plan calls for enhancing and restoring valuable wildlife habitat and maximizing wildlife and aquatic life values; and providing continuous public access to the Bay and salt ponds along levees in a manner protective of sensitive wildlife.

Most of the Shoreline Phase I Study Area is part of the Don Edwards San Francisco National Wildlife Refuge. The refuge is part of the South Bay Salt Pond Restoration Project. The South Bay Salt Pond Restoration Project partners (including the refuge) are in the process of implementing the plan; completed actions include restoring Ponds A16 and A17, which are adjacent to the project area, and Ponds A19, A20, and A21, which are just north of the study area. Other refuge units are managed through a Comprehensive Conservation Unit, including Ravenswood and Eden Landing. These areas are to the northwest and north of the study area and South Bay Salt Ponds Restoration Project area, respectively.

The entire project area is located within the wildlife refuge priority area. With the exception of a very small area immediate south of Pond A18, the entire project would restore tidal marsh habitat, resulting in 2,900 acres of created habitat. The restored habitat would contribute to the Don Edwards San Francisco Bay Wildlife Refuge and facilitate recreation in the refuge.

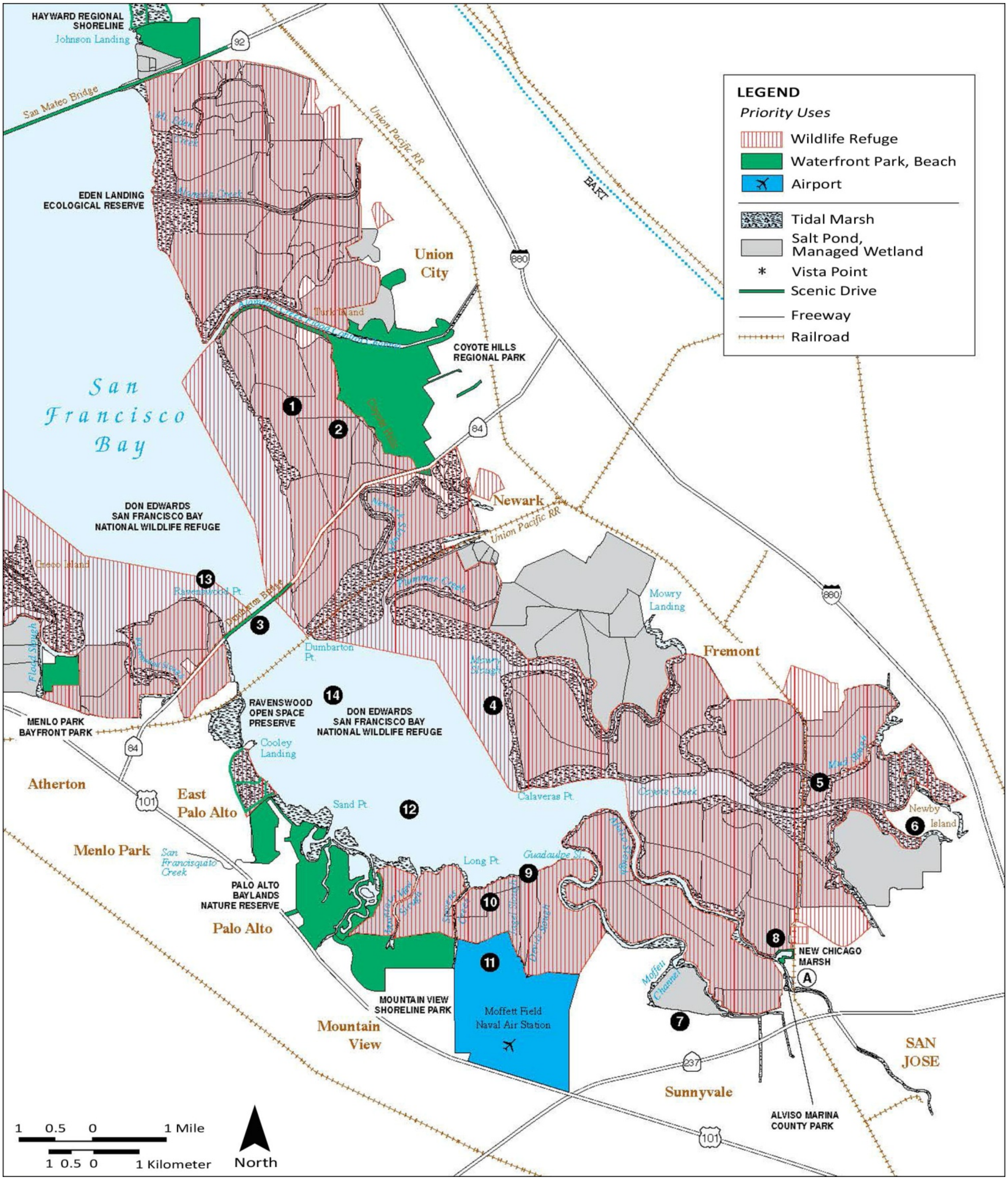

Figure 3: Bay Plan Map 7 - South Bay
(Source: San Francisco Bay Plan, 2012)

3.12 Box 2 (r): Area of Total Project Site Reserved for Non-Public Access Uses

This information will be provided during preconstruction engineering and design.

3.13 Box 2 (s): Area of Total Project Site Reserved for Public Access

This information will be provided during preconstruction engineering and design.

3.14 Box 2 (t): Development in the Primary Management Area of Suisun Marsh

The proposed project is located in southern South San Francisco Bay, outside of the Suisun Marsh primary management area. No development will occur in the Suisun Marsh. Suisun Marsh is not discussed further in this consistency determination.

3.15 Box 2 (v): Information About the Total Project and Site

This consistency determination provides all information required by BCDC's consistency determination application. Box 2(v)(1 – 10) requests specific information in sections 1 through 10—this information is provided; however, for clarity, in different sections of this consistency determination, as summarized below. Large scale project plans are provided as Exhibit A in the application and Exhibit B includes 8.5 x 11 inch project site plan, public access and open space plan, and vicinity map (these exhibits are not included in this appendix, but are included in the application).

Project Overview

The study area for South Bay Shoreline Phase 1 encompasses a portion of the South Bay shoreline between Alviso Slough and Coyote Creek, along with adjacent managed ponds, tidal waters and marshes, and upland areas in the vicinity of Alviso (Figure 1). Land areas include the community of Alviso, nearby light industrial areas, and a wastewater facility. The study area covers about 7,400 acres in Santa Clara County and consists of the area between the mouth of the Guadalupe River (to the west) and the mouth of Coyote Creek (to the east) and extends south to include both the community of Alviso and the San José–Santa Clara Regional Wastewater Facility (Wastewater Facility). The study area includes areas where restoration and flood risk management action may be implemented and former salt ponds A9 through A15 and A18.

The Recommended Planincludes: construction raising of existing flood risk management levees bayward of the Alviso and the adjacent Wastewater Facility, construction of a 30 foot horizontal to 1 foot vertical (30:1) ecotone on the bayward side of the levee adjacent to Ponds A12 and A13 and A18 to support tidal marsh restoration of Ponds A9 through A15 and Pond A18 with a 30:1 ecotone. The tidal marsh restoration approach would be consistent with the approach taken by the South Bay Salt Pond Restoration Project (SBSPRP), as follows: modification of internal levees, construction of ditch blocks along existing levees and adjacent channels, construction of pilot channels along historical contours, and breaching of outboard levees. The ecotone will provide transitional habitat between the tidal marsh and the upland levee, providing refugia for wildlife during flooding and wave attenuation. The flood risk management levee will be earthen with a height of 15.2 feet NAVD 88 and constructed on top of existing levees. The constructed levee would provide tidal flood risk management benefits to a population of about 6,000 residents and people working in the area and would provide protection from a 1-percent ACE flood through the end of the 50-year period of analysis (2017-2067), accounting for sea level rise under the USACE high scenario. Additionally, this project would tie into the surrounding flood risk management projects, which also provide protection from a 1-percent ACE flood.

The project would create approximately 2,900 acres of tidal marsh and transitional ecotone habitat in the Alviso Pond Complex and City of San José-owned Pond A18. The restored habitat would contribute to the Don Edwards San Francisco Bay Wildlife Refuge and benefit salt marsh harvest mouse and California Ridgeway's rail, which reside almost exclusively on tidal marsh habitat. Finally, the project would provide recreation opportunities in the project area, which would tie into surrounding recreational areas, including the Bay Trail and refuge.
Landside areas would have a 15-foot-wide permanent easement (for operation and maintenance) and an additional 15-foot-wide temporary easement for the construction period along the full length of the levee. The new levees would be at least partially on land managed by the USFWS.

In addition to the flood risk management and ecosystem restoration, recreation features will include educational and interpretive signs, seating areas with benches, multi-use trails, wildlife viewing platforms, and a pedestrian bridge over Artesian Slough and the Union Pacific Railroad.

Although the project includes recreation features, the primary purpose of the proposed fill is to construct an earthen levee to protect the Alviso community and Wastewater facility from tidal floods and restore the tidal ecotone lost from the area. The secondary purpose of the fill is to enhance the levee resistance to sea level rise.

Project Purpose

Much of the study area is not currently subject to tidal action; however, historically it consisted of tidal marsh and slough prior to diking efforts in the 20th century. Loss of these tidal habitats has greatly compromised biological and water quality functions in the study area. In addition, most of the study area is potentially vulnerable to sea level rise over the course of the study's evaluation period of 50 years due to its topographic position at the extreme downstream end of the Santa Clara Valley where the valley adjoins San Francisco Bay.

As a result of severe subsidence in the study area, many areas landward of the former salt ponds became vulnerable to tidal flooding. The non-engineered dikes protecting the salt ponds were created as early as the 1920s and generally maintained to protect the ponds from tidal flooding when they were being used for salt production. These dikes were not engineered nor intended to reduce flood risk for urban areas. The lands behind the diked ponds are now substantially urbanized and have high-value development and include much of the well known Silicon Valley as well as transportation corridors, wastewater plants, and other critical infrastructure. In addition, a substantial sea level change is expected during the 50 year planning horizon for this study, exacerbating problems from tidal flooding.

The former management of the study area ponds by Cargill provided incidental flood risk reduction to the South Bay area. The transfer of pond ownership to the USFWS and the City of San José created an opportunity to restore tidal marsh habitat by breaching these non-engineered pond dikes. However, breaching the non-engineered pond dikes would increase flood risk to inland areas that are currently separated from San Francisco Bay by these ponds. Therefore, the Shoreline Study purpose is to provide flood risk management to the Community of Alviso and the larger Silicon Valley, along with providing ecosystem restoration and maintaining recreational opportunities.

3.15.1 Detailed Project Description

The principle flood risk management and ecosystem restoration features of the proposed project are listed below and shown on Figure 4. Details regarding each of these project components are discussed below.

- ***Flood Risk Management:*** Construction of approximately 3.8 miles (20,000 linear feet) of flood risk management levees on top of existing levees bayward of Ponds A12, A13, A16, and A18 and installation of tide gates at the Union Pacific Railroad and Artesian Slough crossings. The levees would provide a more reliable form of tidal flood risk management to the community of Alviso and the Wastewater Facility;

- ***Ecosystem Restoration:*** Construction of a 345-foot-wide (116.3 acres) ecotone bayward of the flood risk management levees in Ponds A12, A13, and A18 (not A16) to create transitional habitat and breaching of outboard levees to allow for tidal marsh establishment in Ponds A9, A10, A11, A12, A13, A14, A15, and A18; and

- ***Recreation:*** Designation of multi-use public access trails along the tops of constructed levees, construction of pedestrian bridges across the Union Pacific Railroad tracks and Artesian Slough; and installation of seating areas with benches, educational and interpretive signs, and wildlife view platforms.

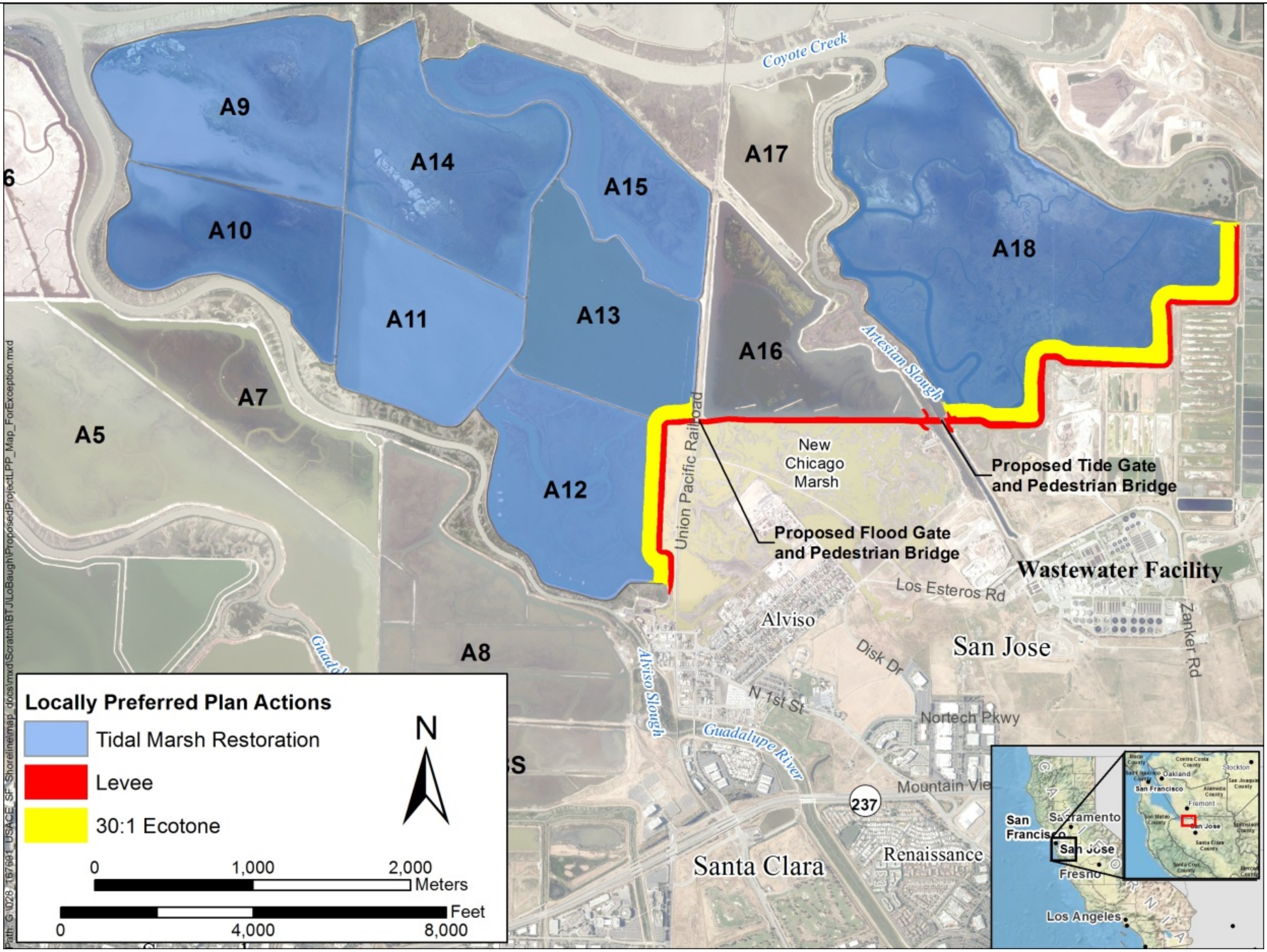

Figure 4: South Bay Shoreline Phase I Project Components

Flood Risk Management Levees

Approximately 897,000 cubic yards of fill would be required to construct the flood risk management levees. Construction would take approximately 3 to 4 years (anticipated to begin in 2018). The levees would be located landward of Ponds A12, A13, A16, and A18, all of which are considered BCDC jurisdictional salt ponds. Fill would be used to raise levee heights and widen the base of the levee. Because the fill would be placed on top of existing levees, fill would be placed outside of BCDC jurisdiction. Ponds A12, 13, and 16 are USFWS lands and Pond A18 is Wastewater Facility lands (i.e., City of San José lands). All flood risk management levee segments would be maintained by the Santa Clara Valley Water District (SCVWD) as a non-federal sponsor. Due to the nature of the flood risk and the location of the community of Alviso adjacent to the USFWS refuge, a levee system addressing flood risk in Alviso must be located at least partially on USFWS lands.

The levee would be constructed from Alviso Slough near the confluence with Guadalupe River, moving north along Pond A12, then south along the corner of Pond A13 immediately west of the active railroad. A flood gate would be installed over the Union Pacific Railroad. The levee would continue south along the landward side of Pond A16, north of New Chicago Marsh, to Artesian Slough. A flood gate would be installed over Artesian Slough. The levee would continue from the Artesian Slough flood gate in towards the eastern point of Pond A18 in a stair-step fashion along the existing southern boundary of Pond A18 (Figure 4).

The levee along Pond A12 would be approximately 3,650 linear feet. The levee along A13 will be approximately 750 linear feet. The levee along Pond A16 would be approximately 4,700 feet (no ecotone fill is associated with this Pond). The levee along Pond A18 would be about 10,300 linear feet to its terminus at the confluence of Coyote Slough. The rail road tide gate structure would be approximate 150 feet with an 80-foot wide opening (this includes concrete wingwalls on either side). The crossing of Artesian Slough would include about 280 linear feet of levee and an 80 linear feet tide gate structure.

In total, the flood risk management levee would be approximately 3.8 miles (20,000 linear feet), 110 feet at the base, and 16 feet at the top. The total length would include tie-ins near the existing levee near Alviso Marina and Coyote Creek. Closure structure would comprise approximately 550 linear feet. Additional detail regarding the exact alignment of levees, as well as the dimensions and associated fill will be available during the pre-construction engineering and design phase.

Beyond the physical footprint of the levee itself, on the landside (opposite the ponds), there would be a 15-foot-wide permanent easement (for operation and maintenance) and an additional 15-foot-wide temporary easement for the construction period along the full length of the levee.

Construction of any of the Alviso levee would block a fresh water input from Artesian Slough to a ditch and fresh water marsh area near the environmental education center. To compensate for the loss of fresh water inflow to the marsh, a small breach of an existing berm along the west side of Artesian Slough would occur to allow gravity flow of fresh water from the slough to the unnamed ditch and adjacent marsh. The breach would be sized to provide the same amount of input that occurs under the existing conditions.

Typical Cross Section of Flood Risk Management Levee: The engineered flood risk management levee would be earthen. The proposed change in levee size from the existing levee (e.g., along the southern edge of Pond A16) would be an increase of up to approximately 10 feet in height (after settlement) and about double in existing width (Figure 5). For example, the Alviso Segment levee along the south edge of Pond A16 would increase in height from approximately 6 to 15.2 feet and increase in width at the toe from approximately 55 to 110 feet. The average width at the crown of the levee would be 16 feet, with 3:1 (horizontal: vertical) slopes would be constructed (not including ecotone construction). Along the east edge of Pond A12, southern portion of A13, and A18, the Alviso Segment levee would have an additional 345-foot-wide ecotone along its west side (i.e., bayward).

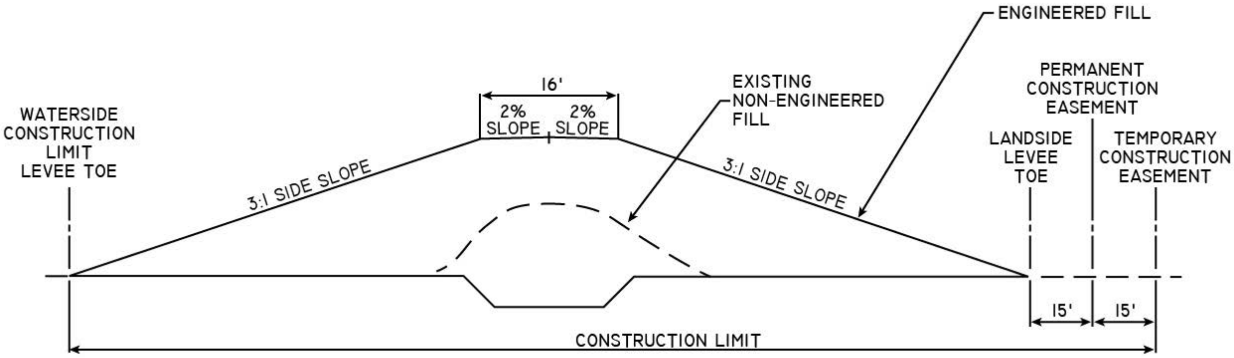
ENGINEERED FILL
16'
2% SLOPE
2% SLOPE
EXISTING NON-ENGINEERED FILL
PERMANENT CONSTRUCTION EASEMENT
WATERSIDE CONSTRUCTION LIMIT LEVEE TOE
LANDSIDE LEVEE TOE
TEMPORARY CONSTRUCTION EASEMENT
3:1 SIDE SLOPE
3:1 SIDE SLOPE
15'
15'
CONSTRUCTION LIMIT

Figure 5: Typical Cross-Section of Engineered Flood Risk Management Levee

The levee design will include vegetation planting for erosion protection on the bayward and landward side slopes. Vegetation is anticipated to be continuous and able to provide erosion protection from overtopping of the levee. The bayward vegetation will be seeded or planted on the levee following construction and consist of marsh vegetation and peripheral halophytes at the toes of the levee and upland grasses at higher elevations. The combination of vegetation, buried stone, and/or transitional habitat fills (i.e. planting berms) is proposed to balance requirements for levee safety with the need to limit disturbance from traditional maintenance activity (described below) such as regular mowing in/near habitat for sensitive species such as the salt marsh harvest mouse.

Proposed vegetation will include marsh species and peripheral halophytes, such as 12- to 18-inch tall pickleweed, from elevation 0 to 3 feet above the typical high water elevation. The high water elevation corresponds to approximately elevation 6 and 10 feet on the landward and bayward side slope, respectively. Upland grasses will occupy the side slopes between the levee crest and the pickleweed. Combinations of buried stone protection and buried gravel may be necessary to stunt the growth of native vegetation in lieu of regular mowing (i.e., to reduce the frequency of mowing) in an environmentally sensitive area, or to provide erosion protection where vegetation cannot be supported.

Certain locations may require special structures or treatment as follows: where the levee crosses an existing water feature such as a slough, structures would be installed to allow drainage during normal conditions and closure during flood conditions. Where the levees cross below-ground infrastructure (utilities, etc.), load-bearing structures may to be needed to support the weight of levee materials. Other materials such as geotextile fabric, stone column, foundation over-excavation, or replacement with stronger soil may also need to be included in the final levee design.

Flood Gates

An approximately 150-foot-wide by 15-feoot-tall railroad floodgate would be installed where the active railroad line crosses the flood risk management levee adjacent between Ponds A13 and A16. Concrete barriers would be installed on either side of the railroad right-of-way and would tie into the earthen levees. The railroad flood gate opening would be installed with an approximate 80-foot wide opening to allow the trains to pass through the levee. Concrete barriers (wing walls) would be installed on either side of the railroad right-of-way and would tie into the earthen levee. Two 60.5-foot-long by 10.25-foot-wide metal leaf swing gates would be connected to the barrier and would remain open during normal conditions and closed during flood conditions. The gate would be manually operated during flood conditions and supported by the wing walls. In total, the rail road flood gate would be about 850 cubic yards.

An approximate 700-foot-wide by 15-foot-tall gate closure system would also be constructed across Artesian Slough. The tide gate would be constructed at least 300 feet bayward of the existing Wastewater Facility outfall for treated water at Artesian Slough. The tide gate fill is approximately 1,300 cubic yards. The proposed levee and tide gate are not anticipated to interfere with the Wastewater Facility general operations or operation/discharge during storm events. The tide gate would only be closed during extreme storm events. When the gate is closed, the Wastewater Facility will need to pump water outputs over the gate, or provide for internal excess water storage during a storm event. With or without the project, the Wastewater Facility would need to develop a plan to pump or store waters during such events given increases in bay water levels that correspond with future sea level rise scenarios. During these extreme storm events, flooding of the New Chicago Marsh could also occur due to capacity constraints of the interior drainage system; however, the availability of facility pumps or the capacity to store excess waters could lessen the impacts to the marsh areas.

Ecosystem Restoration

The USFWS and USACE are partnering to include habitat restoration in the overall South Bay Shoreline Phase I project. The plan would construct approximately 116 acres of transitional habitat, 22 acres of various cordgrass habitat on the internal berms, and restore 2,475 acres of tidal marsh from existing salt pond habitat, including approximately 2,045 acres of Ponds A9 through A15 and 856 acres of Pond A18. In total, the project would create about 2,900 acres of new habitat. Figure 6 and Table 1: Post-Restoration Habitat Conditions in the Study Area provides details of the restored habitat that is expected to occur following construction of the project.

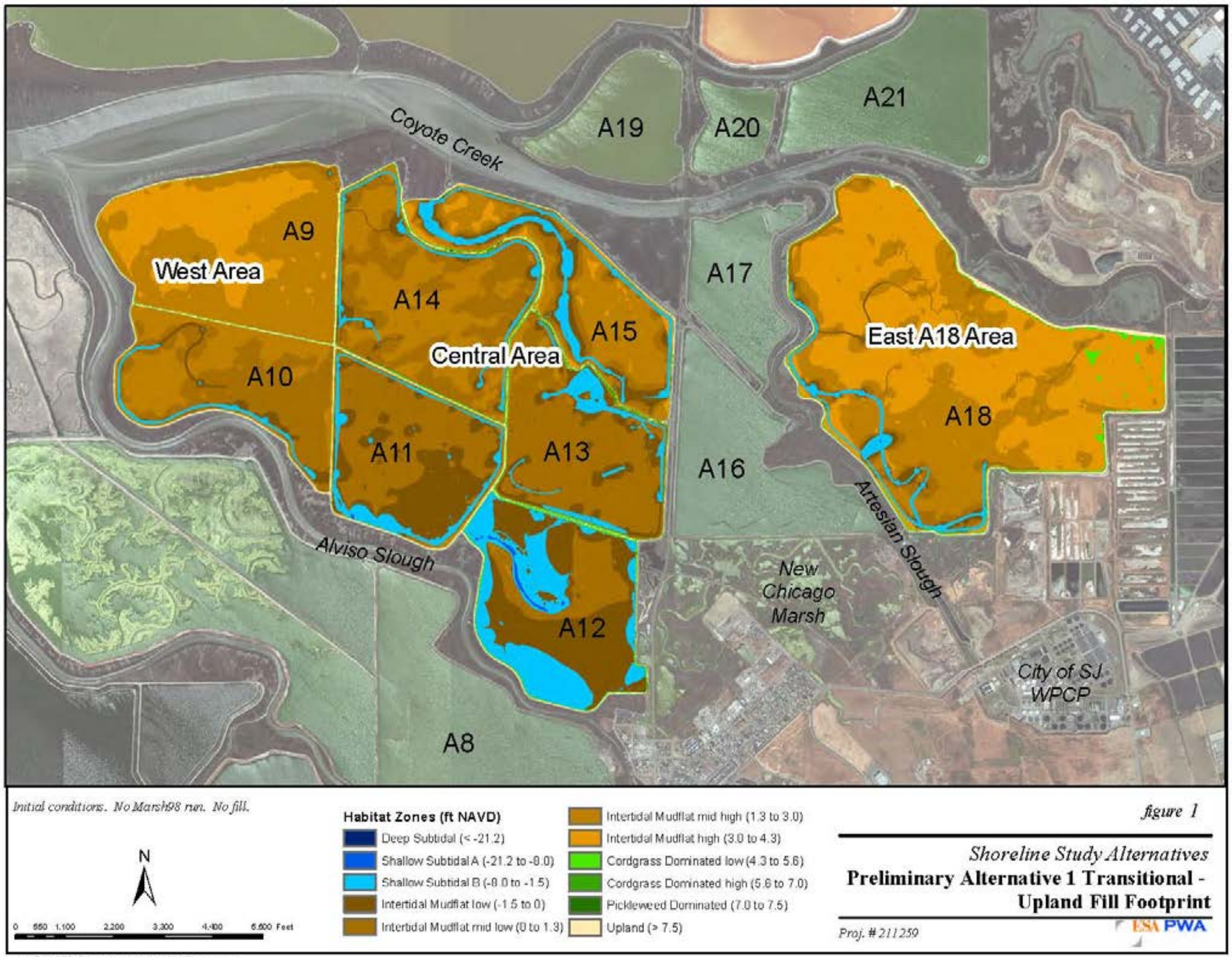
Coyote Creek
A19
A20
A21
A9
West Area
A14
A17
A15
East A18 Area
Central Area
A10
A18
A11
A13
A16
Artesian Slough
Alviso Slough
New Chicago Marsh
A12
City of SJ WPCP
A8
Initial conditions. No Marsh98 run. No fill.
N
0 550 1,100 2,200 3,300 4,400 6,600 Feet
Habitat Zones (ft NAVD)
Deep Subtidal (< -21.2)
Shallow Subtidal A (-21.2 to -8.0)
Shallow Subtidal B (-8.0 to -1.5)
Intertidal Mudflat low (-1.5 to 0)
Intertidal Mudflat mid low (0 to 1.3)
Intertidal Mudflat mid high (1.3 to 3.0)
Intertidal Mudflat high (3.0 to 4.3)
Cordgrass Dominated low (4.3 to 5.6)
Cordgrass Dominated high (5.6 to 7.0)
Pickleweed Dominated (7.0 to 7.5)
Upland (> 7.5)
figure 1
Shoreline Study Alternatives
Preliminary Alternative 1 Transitional - Upland Fill Footprint
Proj. # 211259
ESA PWA

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Figure 6: Shoreline Phase 1 Project Restored Habitat Zones

Table 1: Post-Restoration Habitat Conditions in the Study Area

Pond Number	Existing Size (acres)	Existing Type	Post-restoration Conditions
A9	365	Circulation pond (open water)	Tidal marsh habitat = maximum of 365 acres Levee footprint = none Transitional habitat = none
A10	250	Circulation pond (open water)	Tidal marsh habitat = maximum of 250 acres Levee footprint = none Transitional habitat = none
A11	260	Circulation pond (open water)	Tidal marsh habitat = maximum of 260 acres Levee footprint = none Transitional habitat = none
A12	310	High salinity (batch pond)	Tidal marsh habitat = 280.2 acres Levee footprint = 5.8 acres Transitional habitat = 24.0 acres
A13	270	High salinity (batch pond)	Tidal marsh habitat = 263.4 acres Levee footprint = 0.8 acre Transitional habitat = 5.8 acres
A14	340	Circulation pond (open water)	Tidal marsh habitat = maximum of 340 acres Levee footprint = none Transitional habitat = none
A15	250	High salinity (batch pond)	Tidal marsh habitat = maximum of 250 acres Levee footprint = none Transitional habitat = none
A18	856	Circulation pond (open water)	Tidal marsh habitat = 774.4 acres Levee footprint =15.5 acres Transitional habitat = 66.6 acres

To restore the tidal marsh habitat, approximately 1.51 million cubic yards of earthen fill would be placed to construct an ecotone in salt ponds adjacent to the flood risk management levee. The ecotone would begin at the crown of the constructed levee and gently slope bayward at a 30:1 ration for approximately 345 feet. Of the 1.51 million cubic yards, approximately 940,000 cubic yards would be placed in Clean Water Act section 404 jurisdictional wetlands and 328,000 would be placed outside of 404 jurisdictional wetlands. This consistency assumes that the jurisdictional wetlands are nearly consistent with BCDC jurisdiction and, therefore, the fill placed in BCDC jurisdictional wetlands would be similar. The fill locations and volumes will be refined during preconstruction engineering and design and the revised information will be provided.

Depths within the restored tidal marsh would range from -8.0 to 4.3 feet MLLW in Ponds A9 through A15 and 1.3 to 7.0 feet MLLW in Pond A18. Pond A18 would also include cordgrass habitat as well. Transitional habitat would be located only in Ponds A18, A12, and A13, totaling approximately 116 acres. Transitional habitat is defined as a transition area between two distinct habitats (in this case, tidal wetland and upland habitat). Currently in San Francisco Bay, the wetland-upland transition zones have largely disappeared from the edges of marshes. These important areas serve as high tide refugia for species such as Ridgway's rails, black rails, and the salt marsh harvest mouse and provide habitat for a unique suite of plant species. These areas also allow landward migration of marshes as sea levels rise and provide greater protection from extreme tides and waves. Adding transitional habitat would benefit the recovery of wetland species and restore these ecological functions. In addition, a large ecotone would buffer any management actions that would be necessary on the adjacent levee per USACE requirements. The locations of ecotone transitional habitat are shown on Figure 7.

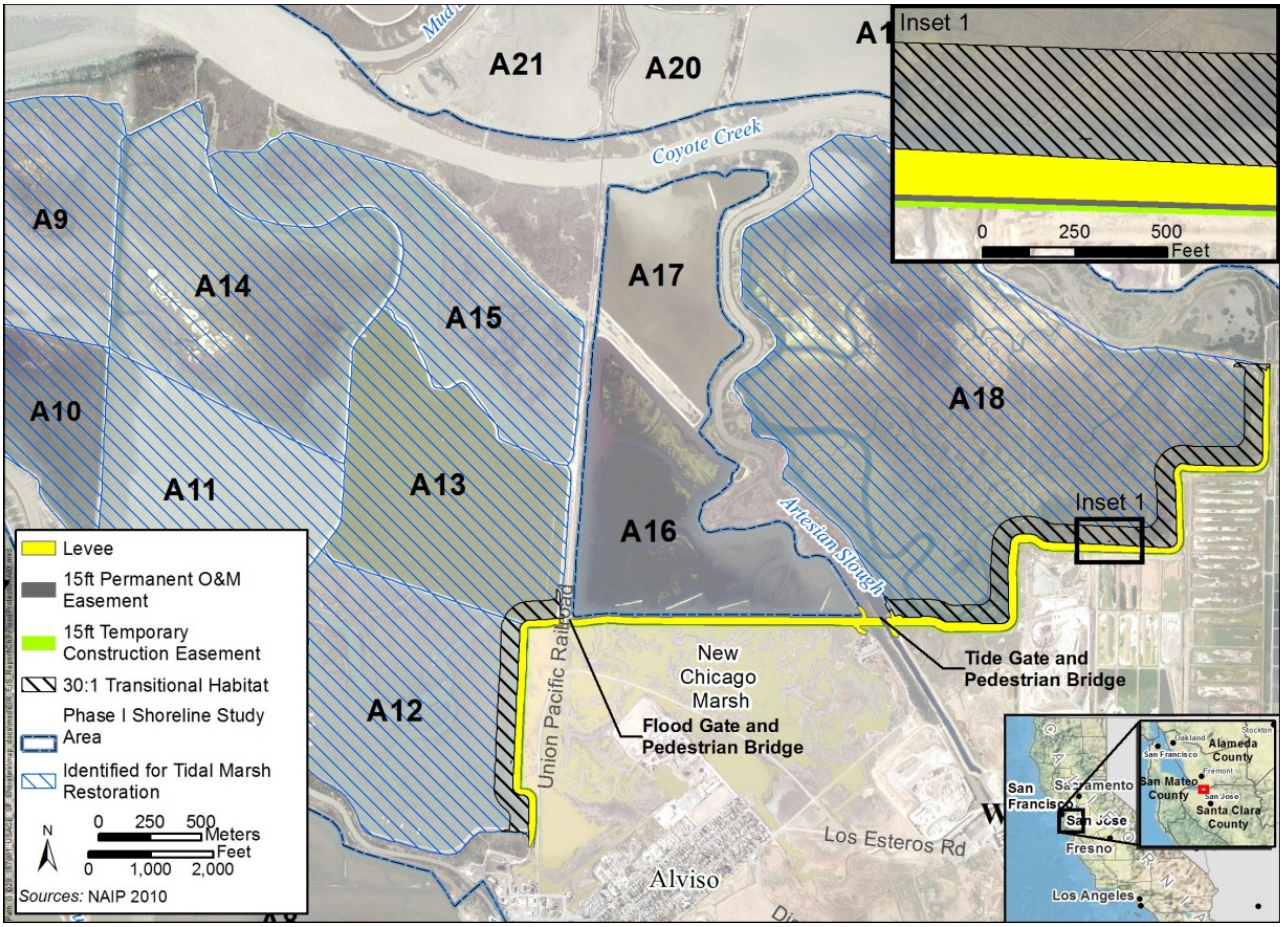

Figure 7: Ecotone Footprints in the Project Area

Figure 8 shows how the ecotone is expected to be restored immediately following completion of the fill and planting (approximately 2021). Figure 9 shows how the ecotone restoration is expected to evolve at the end of the project period (i.e. 2067). As shown, over time the shallow subtidal, intertidal mudflat, and low marsh portion of the ecotone slope will begin to fill in naturally with sediment. The sedimentation will naturally create a wide pickleweed dominated middle marsh with a narrow high marsh wetland/upland transition zone. These areas will be tidally-influenced and become tidal marsh habitat within BCDC's San Francisco Bay habitat. A 100-foot band of the upland grassland habitat would be considered BCDC's shoreline band habitat.

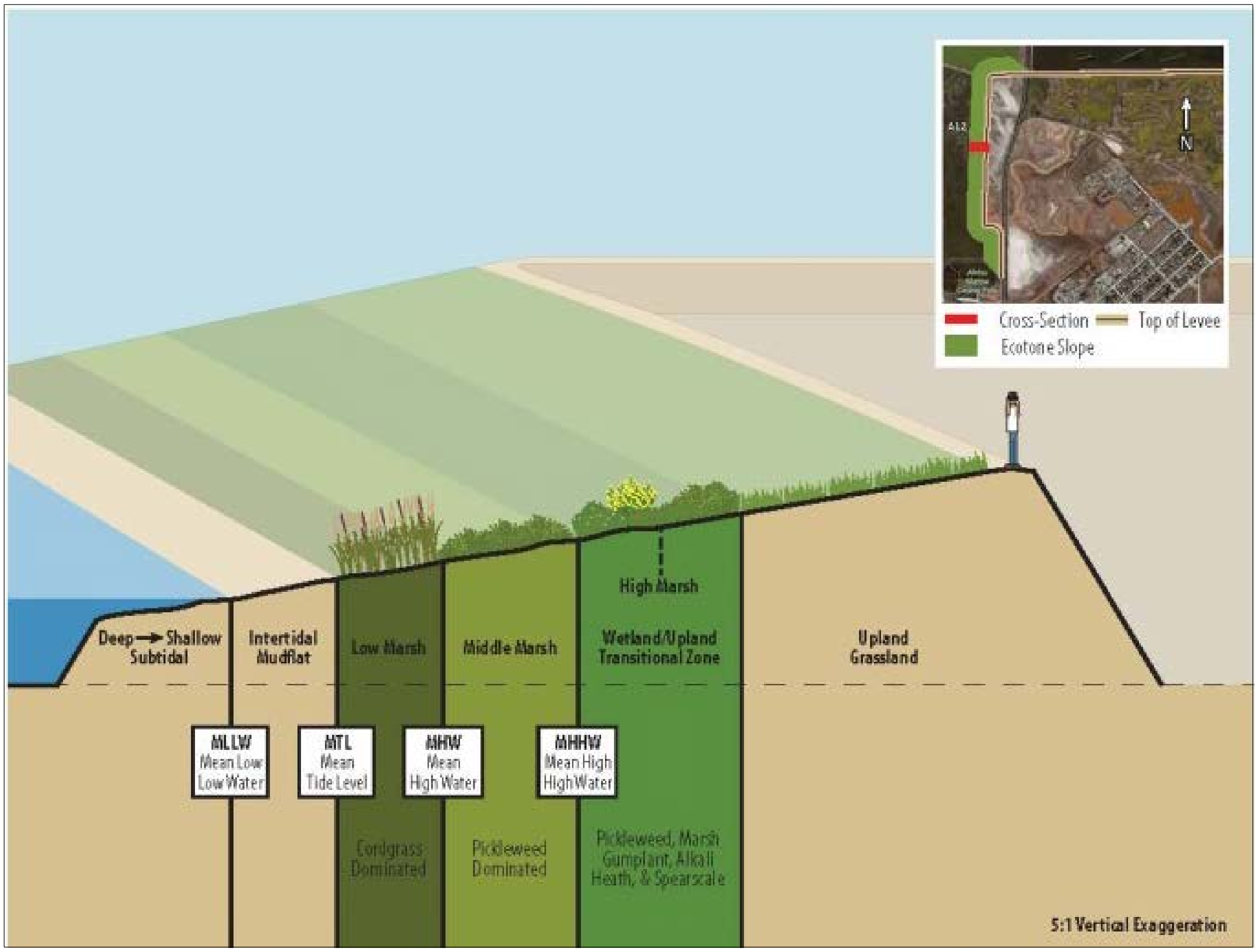

Figure 8: Typical Cross Section of the Proposed Ecotone with 30:1 Side Slopes at Year 2021

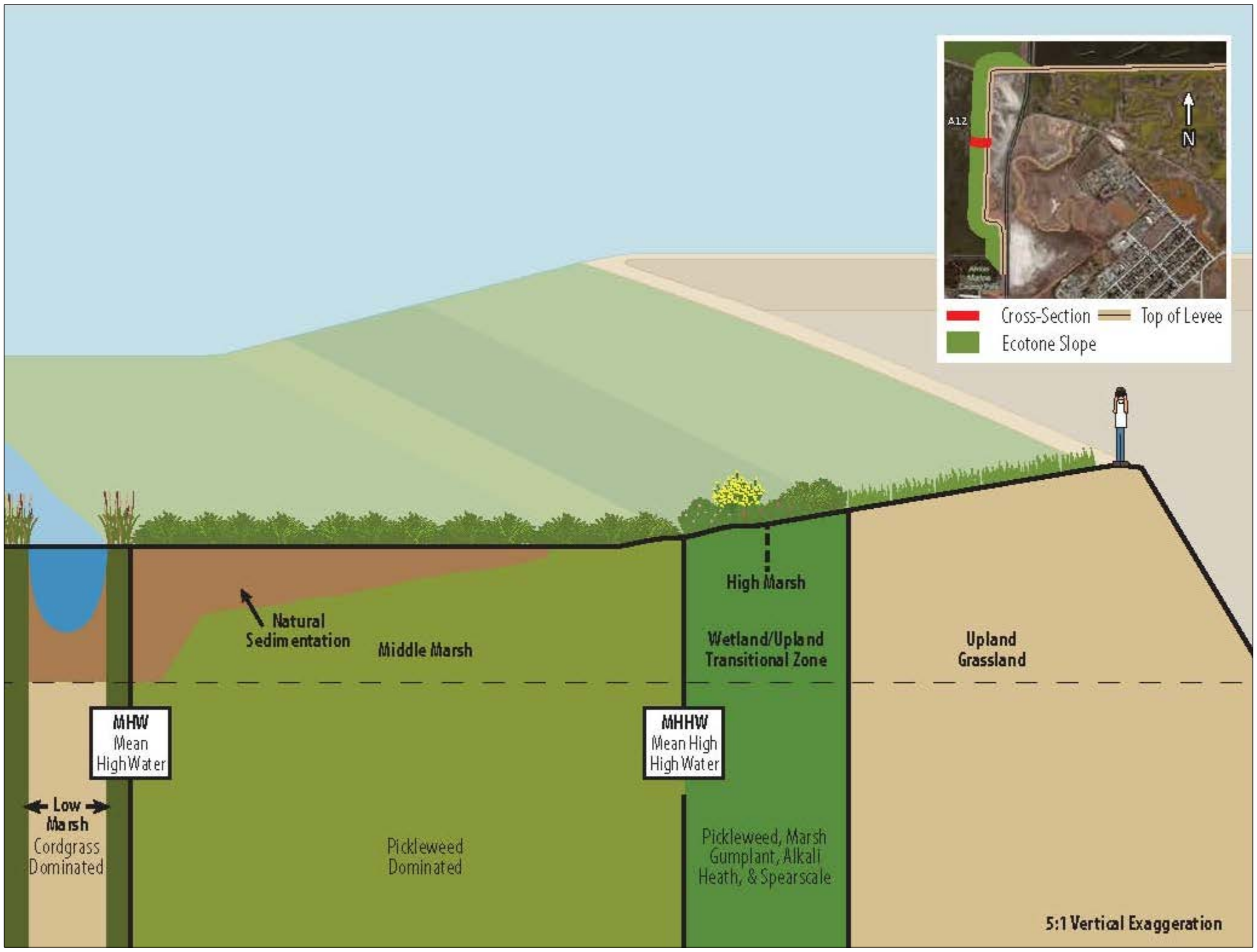

Figure 9: Typical Cross Section of the Restored Ecotone at Year 2067

Restoration construction activities would be implemented by constructing the ecotone first; preparing the ponds; completing any external channel work, such as constructing pilot channels; and then breaching outboard levees. To the extent possible, activities conducted within the ponds (internal side of outboard levees) would occur during the low-water condition following the draining of each pond. Existing pond dikes would provide a level of work-area isolation and therefore minimize impacts on aquatic species. In some cases, cofferdams and dewatering pumps would temporarily be used to isolate a work area. All other activities, including portions of outboard pond dike breaching and pilot channel excavation, would be conducted along the bayward side of the perimeter levees, and would therefore require in-water work.

Restoration fill would result in approximately 14,700 linear feet by 345 feet wide areas of existing salt pond habitat being filled, for a total fill area of approximately 97 acres in Ponds A12, A13, and A18. Ecotone fill would slope gently from the toe of the constructed flood risk management levees bayward, with a 30:1 slope, from the toe of the constructed flood risk management levee to approximately 345 feet bayward of the levee.

Upland transitional habitat can attenuate waves and reduce wave run-up, increase habitat resiliency by providing space for marshes to retreat inland in the face of sea level rise, and provide refugia for animals such as the California Ridgway's rail and salt marsh harvest mouse during very high tides, when the marsh plain is inundated. The upland transitional habitat adjacent to Pond A18 will be constructed along the interface between the new levee (along the southern and eastern edges of Pond A18) and the newly restored tidal habitat in the pond.

Approximately 1.28 million cubic yards of ecotone fill (discussed in detail below) would be deposited along approximately 3,600 linear feet of levee on the east side of Pond A12 (30 acres), 750 linear feet along Pond A13 (19 acres), and 10,300 linear feet along A18 (67 acres), for a total of 14,700 linear feet (97 acres). In total, the project would result in approximately 96.4 acres of transitional habitat. The transitional habitat along Ponds A12, A13, and A18 will be constructed to incorporate a 30:1 slope, which will add up to 345 feet to the width of the Bay side of the levee footprint. Following construction of the ecotone area, it will be seeded and/or planted with native grasses, forbs, and low shrubs. Such an ecotone will provide substantial benefits for wildlife in the area, as this sort of upland transitional habitat is not well represented in the South Bay. Vegetation allowed to establish in the upland transitional areas would be limited to non-woody and semi-woody plants (and possibly shallow-rooted shrubs) and would be otherwise unmanaged, except to control invasive plants from establishing. Within a narrow (15 feet or less) strip of ecotone fill along the edge of the exposed levee surface, vegetation will be managed the same as on the levee to ensure compliance with USACE levee vegetation policy.

Following construction of the ecotones, outboard levees will be breached in strategic locations (discussed below). Breaching of outboard levees will allow for tidal action into Ponds A9, A 10, A11, A12, A13, A14, A15, and A18. Hydrologic conditions are expected to introduce sediment into the project site, slowly returning the areas to tidal influences as a result of the ditch blocks and levee breaches. When the ponds are initially breached, their bottom elevations will be too low for marsh to form. Several feet of sediment will need to be deposited by natural processes before pond bottoms reach sufficient elevation for marsh vegetation to grow. This sedimentation process, which was modeled for various pond restoration sequences, is expected to proceed at rates determined in part by suspended solids concentrations as well as by factors causing re-suspension of sediment, such as wave action and tidal currents, in the breached ponds (ESA-PWA 2012).

As discussed, the ecosystem restoration strategy is the conversion of Ponds A9 through 15 and Pond A18, which are currently managed as open water ponds, to vegetated tidal wetlands with a goal of maximizing long-term habitat benefits, particularly in consideration of potential sea level rise. Ecosystem restoration also includes creation of a broad, gently sloping ecotone along the new engineered levee.

The following ground preparation actions will be involved in converting the ponds to tidal marsh:

- Drain the pond to the extent feasible. The pond would be drained passively, so it may take several months to dry out. Pumping would expedite the process and may be considered. Because of historic pond subsidence, some pond areas may not be able to completely dry. Draining ponds is dependent on temporal proximity to the western snowy plover nesting season and/or if access to the area can be obtained without impacts to plovers, as dried ponds may invite snowy plover nesting.

- Remove vegetation where needed (i.e., around the breach locations) to discourage salt marsh harvest mice from using the impact areas.

- Construct upland transitional habitat (described below).

- Construct ditch blocks to inhibit flow through existing borrow ditches, promote scour and flow through the remnant historical channels, and provide some initial pickleweed habitat where located at the correct elevations. Without the construction of ditch blocks, the borrow ditches around the perimeter of the restored pond would capture the bulk of the flow, reducing the formation of complex dendritic channels in the restored marsh habitat. Figure 10 depicts proposed locations of ditch blocks in Pond A18.

- Construct pilot channels on the outboard side of the A18 levee to facilitate flow between tidal sloughs and the restored tidal habitat in Pond A18. Three pilot channels will be constructed along Artesian Slough, and one will be constructed along south Coyote Slough. These pilot channels would be constructed at the locations of major historical tidal channels.

- Breach the outboard levee in four locations along Artesian Slough and one location along South Coyote Slough. Breach size would be determined based on the hydrologic relationship between the tidal channel and marsh drainage area and on data from tidal channels in mature marshes throughout the Bay (ESA PWA 2012). Breaches are sized to long-term equilibrium dimensions to balance between excavation costs, scour potential, and tidal drainage consistent with *Design Guidelines for Tidal Wetland Restoration in San Francisco Bay* (PWA and Faber 2004). Dimensions are adjusted to provide a cross-section with side slopes of 4:1 to 5:1 and a bottom width of approximately 10 feet. On the inboard side of the levee, the breach excavation would extend to the levee toe.

Pond A18 would be breached in five locations to facilitate flow of water into and through the pond, allow the tides to carry sediment into the pond, and allow for the retention of remnant channels in the pond bottom (Figure 10).

Breaching of Pond A18 will restore approximately 736 acres of new tidal habitat (in addition to the upland transitional habitat discussed below). When Pond A18 is breached, its bottom elevation will be too low for vegetated marshes to form immediately. Several feet of sediment will need to be deposited by natural processes before the pond bottom reaches a sufficient elevation for marsh vegetation to grow. This sedimentation process is expected to proceed at rates determined in part by suspended solids concentrations as well as by factors causing re-suspension of sediment, such as wave action and tidal currents, in the breached pond (ESA PWA 2012). Because these factors cannot currently be predicted, it is not known how quickly vegetated marsh will form in Pond A18. Monitoring of the restoration process, and adaptive management if necessary to achieve vegetated tidal marsh, will occur per the Shoreline Study Monitoring and Adaptive Management Plan (MAMP) described below. Once tidal marshes have begun to form in the former ponds, the rate of sedimentation will increase as the vegetation slows the water, catches sediment, and retains it. Eventually, with sufficient sediment, it is expected that Pond A18 will be largely vegetated, aside from tidal channels.

Because of the location of Pond A18 relative to freshwater inputs such as the WPCP outfall along Artesian Slough and Coyote Creek, much of the vegetation in Pond A18 will consist of freshwater and brackish marsh vegetation. However, the considerable increase in tidal prism that will occur once this pond is breached will draw saline water from the Bay into the pond, resulting in the restoration of a considerable amount of salt marsh in the northern portion of Pond A18. In addition, this increase in tidal prism will draw more saline water into and around the marshes downstream, thus converting some existing brackish marsh along Artesian and Coyote Sloughs to salt marsh habitat. An analysis performed by HTH (2012) predicted that the southwestern portion of A18 would be dominated largely by freshwater marsh vegetation (approximately 219 acres), much of the southeastern and central portion would be dominated by brackish vegetation (398 acres), and the northern/northwestern portion of the pond would be dominated by salt marsh (119 acres). The MAMP will include performance criteria for tidal marsh re-vegetation, monitoring to determine the performance of the restoration, and adaptive management measures that may be implemented as necessary to achieve successful restoration.

Because of the tidal flood protection functions currently provided by the outboard levees around Ponds A9 through A15, tidal restoration within those ponds would not be feasible without enhancement of flood protection inboard from those ponds. As a result, tidal restoration on refuge lands, described below, could not occur but for the construction of the flood risk management levee and tide gate. Thus, tidal restoration on refuge lands is dependent on flood risk management levee construction.

The activities involved in tidal restoration in Ponds A9 through A15, and ecotone construction along the eastern edge of Pond A12, are similar to those described for the USACE at Pond A18. However, there is an additional activity that will occur in Ponds A9 through A15 that will not be necessary in Pond A18 because A18 has no internal berms. For restoration of Ponds A9 through A15, breaches in the internal berms will be necessary to reconnect historical channels and restore the hydrologic connections to the innermost ponds in the project footprint. Breach excavations would be sized in a similar manner to those applied to the outboard levees and would extend beyond the levee into the remnant historical channels. Existing internal berms may be lowered in some areas during the breach excavation to create wave breaks to limit wave action, enhance sedimentation, and create vegetated marsh habitat on the berm crests in the short term while the ponds develop from mudflat to vegetated marsh. As Ponds A9 through A15 are breached in a phased manner, berms in adjacent ponds not yet being breached would be temporarily raised to provide increased flood risk management inboard of the current pond breaching actions.

Pond A18 is proposed for the first phase of restoration. Since, Pond A12 has experienced the greatest degree of subsidence it is also proposed for the first phase of restoration. By limiting new tidal exchange to (rather than breaching multiple ponds in the first phase), Pond A12 and A18 can undergo maximum tidal interaction and sediment deposition, thus helping to raise bottom elevations to a point where colonization by marsh vegetation will occur. During the first 3 years (2018–2021), Pond A12 and A18 would be prepared for breaching and inundation through excavation of pilot channels in two locations along Alviso Slough and construction of borrow ditch blocks (Figure 10). Berms between Pond A12 and Ponds A11 and A13 would be temporarily (i.e., until tidal restoration in A11 and A13) raised to provide flood protection for A11 and A13. Surplus material excavated from pond preparation would be used to contribute to other in-pond construction activities requiring material, such as raising internal levees, if determined suitable by Refuge staff. Subsequently, levee breaches would be implemented in Pond A12 and A18 to introduce tidal flow.

Following restoration of tidal flow to Pond A12 and A18, monitoring would be conducted to measure the effectiveness of tidal function equilibrium and restorative values. If necessary, corrective measures would be implemented. A period of approximately 4 years was established for monitoring and adaptive management of these ponds.

Pond preparation for Ponds A9, A10, and A11 would potentially be implemented based on the lessons learned as a result of MAM conducted for Pond A18 and A12. The MAMP includes a series of decisions (based on those in the SBSPRP MAMP) regarding whether to continue breaching that involve monitoring of populations of pond-associated birds, monitoring of sediment accretion in the South Bay, and other factors. If the decision is made to breach these ponds, borrow ditch blocks and pilot channels would be constructed as indicated in Figure 11. Pond A11 would be connected to Ponds A10 and A12 with inboard berm breaches, but it would not be breached directly to Alviso Slough. Two breaches to Alviso Slough are planned in Pond A10, and one breach each to Alviso Slough and Coyote Slough are planned for Pond A9. Internal berms between Ponds A9-A11 and Ponds A13-A14 would be temporarily (i.e., until tidal restoration in A13 and A14) raised to provide flood protection for A13 and A14. Levee breaches for Ponds A9-A11 would be implemented in Year 8 (2025) of the project.

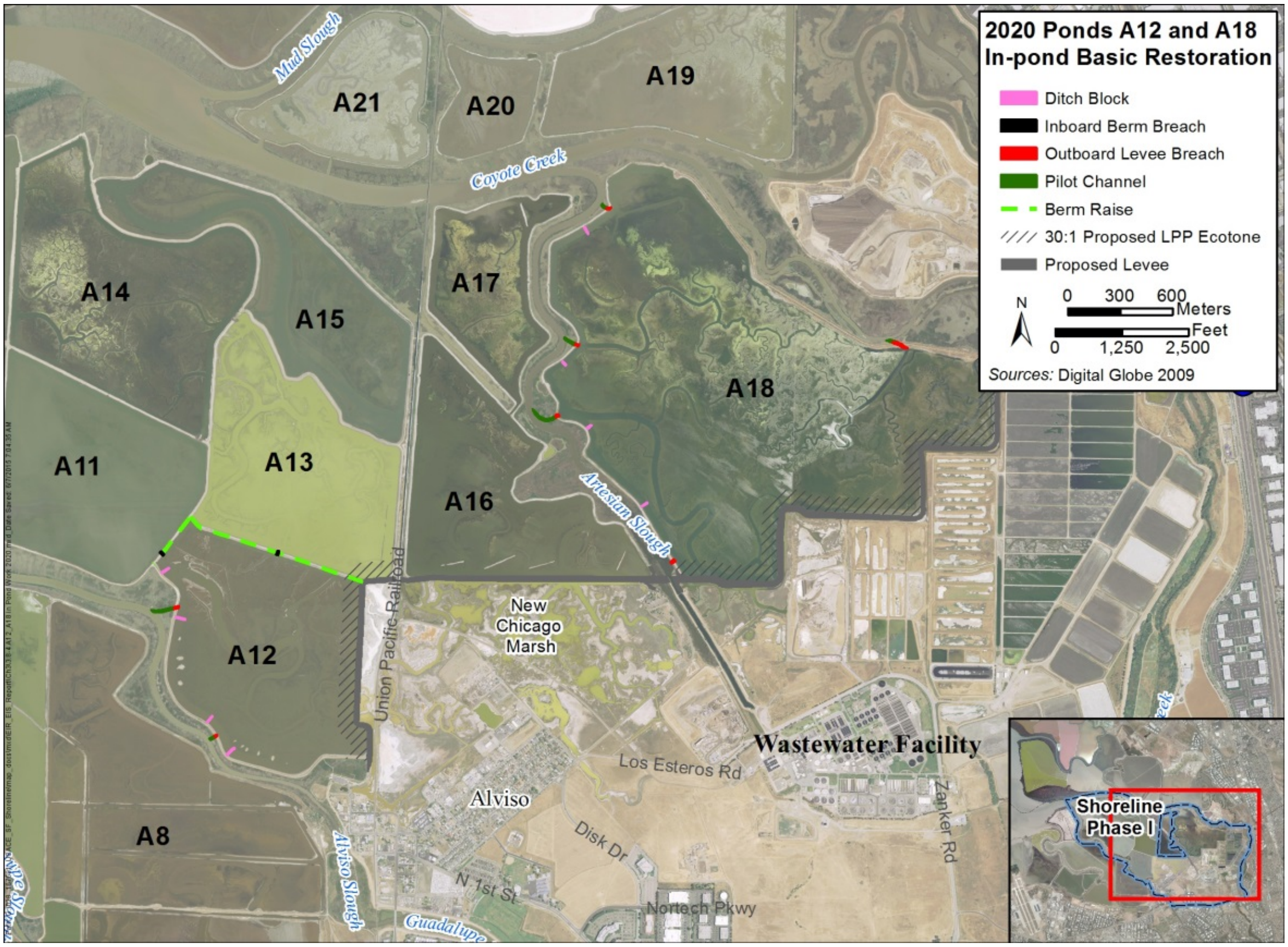

Figure 10: In-Pond Preparation for Ponds A12 and A18

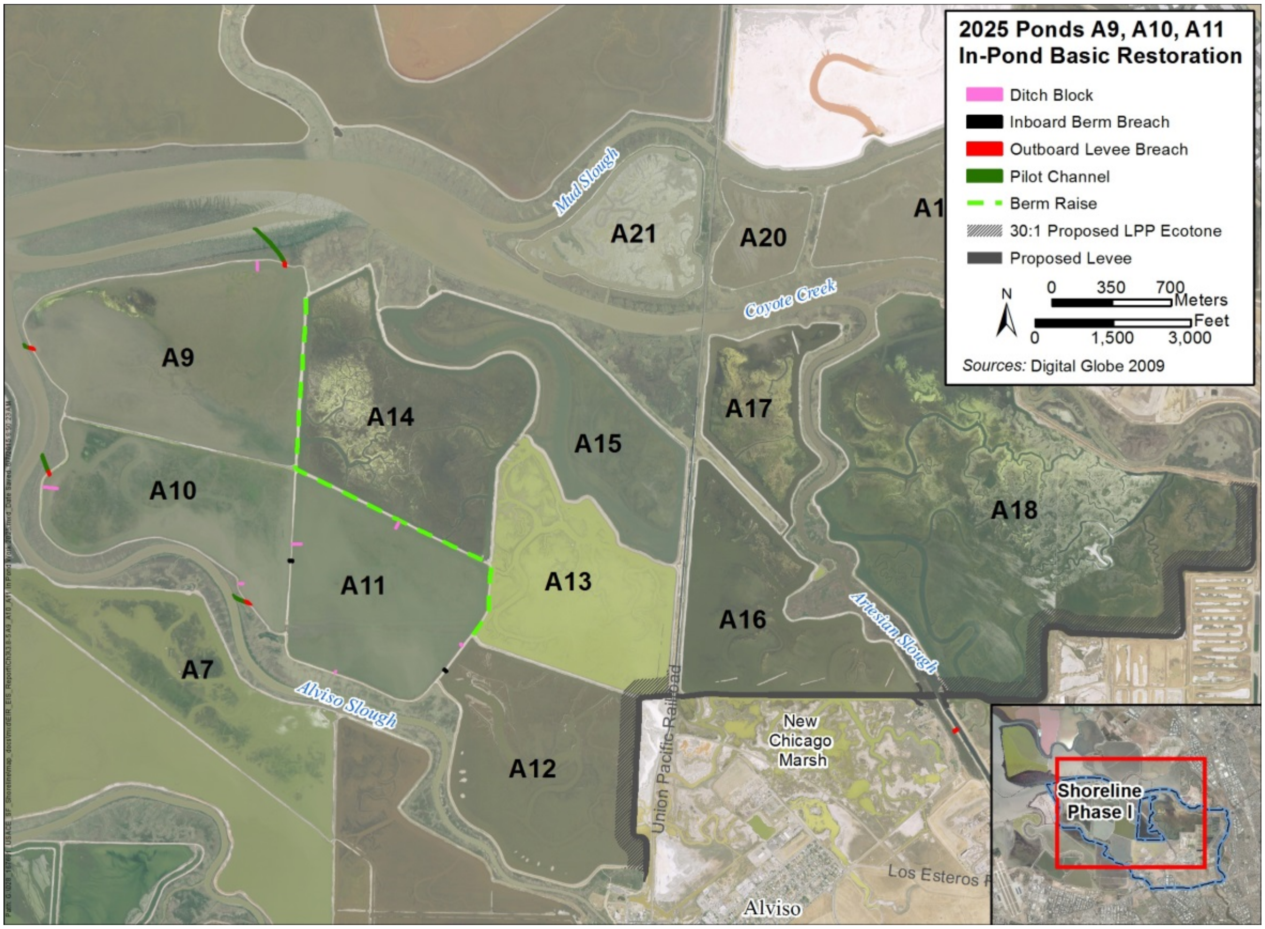

Figure 11: In-Pond Preparation for Ponds A9, A10, A11

Pond preparation for Ponds A13, A14, and A15 would potentially be implemented based on the lessons learned as a result of monitoring and adaptive management conducted for previous ponds, including whether to breach these ponds and restore them to tidal marsh. If the decision is made to breach these ponds, borrow ditch blocks and a pilot channel would be constructed as indicated on Figure 12. Only one outboard breach would occur for tidal restoration in these three ponds; this breach would connect Pond A15 to Coyote Slough along a major historical channel. Inboard berm breaches at the locations of historical sloughs would connect Ponds A13 and A14 to surrounding ponds (A9, A11, A15, and A12) to provide tidal flows to A13 and A14. Levee breaches would be implemented in Year 13 (2030) of the project.

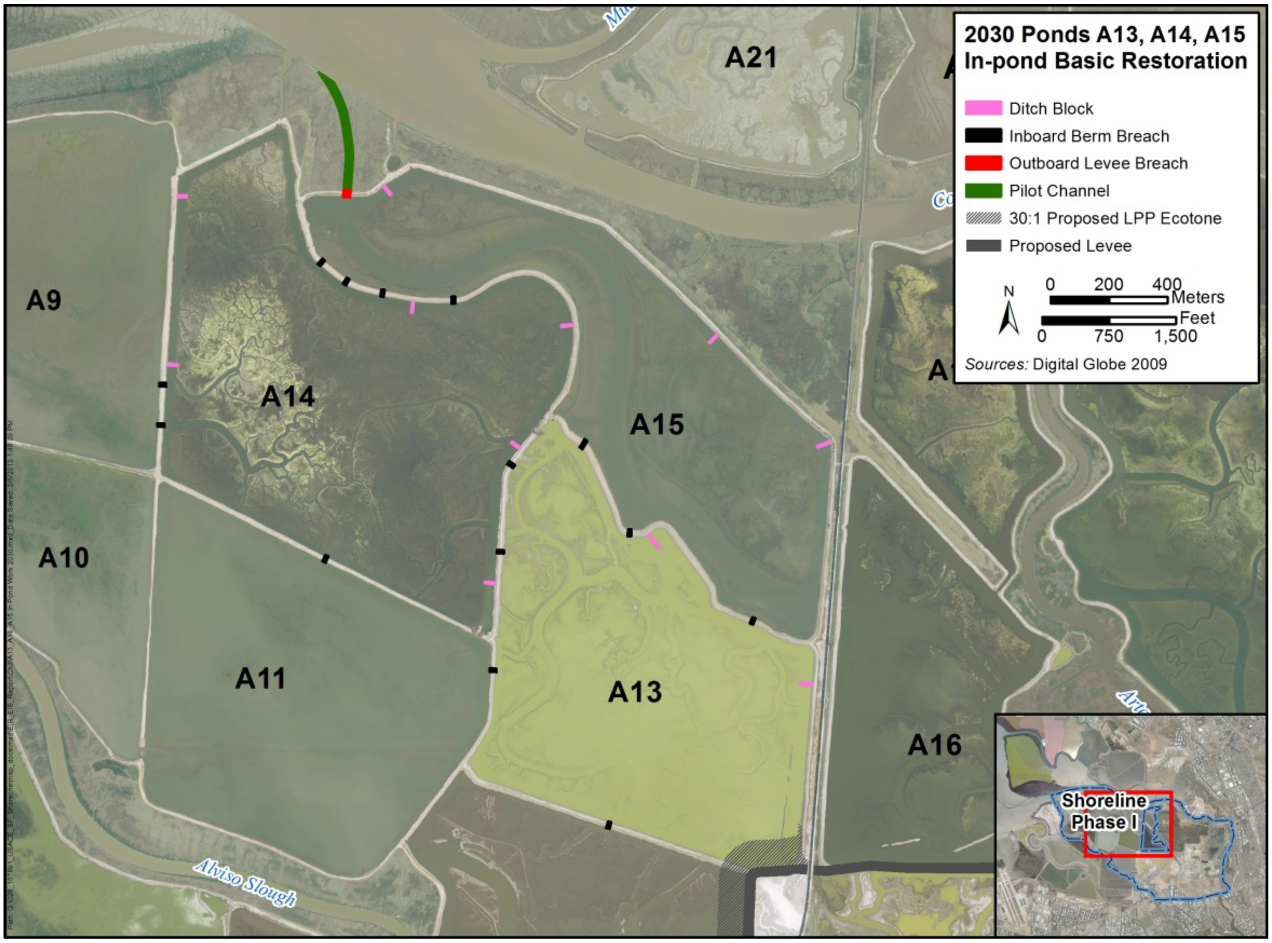

Figure 12: In-Pond Preparation for Ponds A13, A14, and A15

Breaching of Ponds A9 through A15 would restore up to 2,010 acres of new tidal habitat (including the upland transitional habitat discussed below). As discussed for Pond A18 above, sediment accretion will need to occur within these ponds in order to raise pond bottoms to elevations that will support marsh vegetation. Once tidal marshes have begun to form in the former ponds, the rate of sedimentation will increase as the vegetation slows the water, catches sediment, and retains it. Eventually, with sufficient sediment, it is expected that, if breached, Ponds A9 through A15 will be largely vegetated, aside from tidal sloughs. The considerable increase in tidal prism that will occur once these ponds are breached is expected to draw saline water from the Bay into these ponds, resulting in dominance of restored marsh by salt marsh species. An analysis performed by HTH (2012) predicted that the majority of the Pond A9 through A15 system would be dominated by salt marsh vegetation. In addition, this increase in tidal prism would draw more saline water into and around the marshes downstream, thus converting some existing brackish marsh along Alviso and Coyote Sloughs to salt marsh habitat.

Fill Associated with Levees and Ecotone Construction

Approximately 2.16 million cubic yards of earthen fill would be required to construct the proposed flood risk management levee and associated ecotone slope. Of this volume, it is anticipated that approximately 1.65 million cubic yards would be imported and 518,000 will come from the spoil from the existing levee (36.3 acres of non-engineered dikes). Approximately 50 percent in-situ fill (259,000 cubic yards) would be used for the flood risk management levee and 50 percent (259,000 cubic yards) for the ecosystem bench or ecotone. The remaining fill would be imported, primarily from the channel excavation of three other flood risk management projects in the county; Upper Llagas Creek (31 miles away), Upper Guadalupe River (11 miles away) and Permanente Creek (9 miles away). The materials are predominantly clays and silts with some sand. There is no gravel or bedrock at the sites indentified for borrow.

Fill material originating from areas outside the project area will include upland fill material or may include dredge material that is used for ditch blocks, or for portions of the ecotone and flood risk management levee that will be in contact with tidal waters. Dredge or fill material will need to meet the established screening criteria indicated in Table 2 and Table 3, which are based upon the Regional Water Quality Control Board dredge material standards (SFB-RWQCB 2000).

Table 2: Imported Fill Materials Screening Criteria for Organics for Clean Fill Proposed for Placement in Tidal Marsh Areas

Organic Constituents	**Wetland Surface** (micrograms/ kilogram)	**Wetland Foundation** (micrograms/ kilogram)
Dichlorodiphenyltrichloroethanes (DDTs), sum	7.0	46.1
Chlordanes, sum	1.1	4.8
Dieldrin	0.72	4.3
Hexachlorocyclohexane, sum	0.78	
Hexachlorobenzene	0.485	
Polychlorinated byphenyls (PCBs), sum	22.7	180
Polycyclic aromatic hydrocarbons (PAHs), total	3,390	44,792
Low molecular weight PAHs, sum	434	3,160
High molecular weight PAHs, sum	3,060	9,600
1-Methylnaphthalene	12.1	
1-Methylphenanthrene	31.7	
2,3,5-Trimethylnaphthalene	9.8	
2,6-Dimethylnaphthalene	12.1	
2-Methylnaphthalene	19.4	670
Acenaphthene	26.0	500
Acenaphthylene	88.0	640

Table 2: Imported Fill Materials Screening Criteria for Organics for Clean Fill Proposed for Placement in Tidal Marsh Areas

Organic Constituents	Wetland Surface (micrograms/ kilogram)	Wetland Foundation (micrograms/ kilogram)
Anthracene	88.0	1,100
Benz(a)anthracene	412	1,600
Benzo(a)pyrene	371	1,600
Benzo(e)pyrene	294	
Benzo(b)fluoranthene	371	
Benzo(g,h,i)perylene	310	
Benzo(k)fluoranthene	258	
Biphenyl	12.9	
Chrysene	289	2,800
Dibenz(a,h)anthracene	32.7	260
Fluoranthene	514	5,100
Fluorene	25.3	540
Indeno(1,2,3-c,d)pyrene	382	
Naphthalene	55.8	2,100
Perylene	145	
Phenanthrene	237	1,500
Pyrene	665	2,600
Dioxins (total 2,3,7,8-Tetrachlorodibenzo-p-dioxin Toxic Equivalency Quantity (TCDD TEQ))	0.02	0.02

Table 3: Imported Fill Materials Screening Criteria for Metals for Clean Fill Proposed for Placement in Tidal Marsh Areas

Metal Constituents	Wetland Surface (micrograms/ kilogram)	Wetland Foundation (micrograms/ kilogram)
Arsenic	15.3	70
Cadmium	0.33	9.6
Chromium	112	370
Copper	68.1	270
Lead	43.2	218
Mercury	0.43	0.7

Table 3: Imported Fill Materials Screening Criteria for Metals for Clean Fill Proposed for Placement in Tidal Marsh Areas

Metal Constituents	Wetland Surface (micrograms/ kilogram)	Wetland Foundation (micrograms/ kilogram)
Nickel	112	120
Selenium	0.64	n/a
Silver	0.58	3.7
Zinc	158	410
Arsenic	15.3	70

Approximately 897,100 cubic yards of fill would be required to construct the flood risk management levees. The fill would be used the levees would be placed on top of existing levees to raise the heights and widen the base. The fill would be placed partly within and outside of BCDC jurisdiction. The tide gate structure across Artesian Slough would constitute fill in BCDC jurisdiction. Approximately 9,700 cubic yards of fill would be required for these tide gate structures.

The fill required for ecotone construction would occur in salt ponds, which are under BCDC's jurisdiction. Approximately 1,512,300 cubic yards would be required to fill approximately 97 acres of salt pond habitat to raise site elevations such that transitional habitat and tidal marsh can establish. Of the approximately 1.51 million cubic yards of fill, approximately 940,000 would be placed in BCDC jurisdiction.

Earthen fills would be mechanically placed and shaped in controlled lifts with ground based equipment. Lifts would be rolled into a stable continuum resistant to sloughing and erosion. The surface of the completed fill will be tracked walked to provide stability and a reasonably substrate for vegetation. Material is expected to remain within the construction footprint since the levee will be built to the appropriate flood risk management standards. The ecotone will be gently sloping down from the upland area of the flood risk management levee and is not expected to move further into the bay.

Recreation and Public Access

The study area currently contains approximately 21 miles of trail that are part of the larger regional Bay Trail.[1] The trails in this study area are of particular value because they are in and around the Don Edwards Wildlife Refuge, the nation's first urban national wildlife refuge. The refuge, created in 1974, was largely the result of grassroots efforts by the local community to protect the San Francisco Bay ecosystem. According to the refuge manager, approximately 150,000 persons per year use the trail in the study area. The refuge has a parking lot for several dozen cars as well as an environmental education center.

Several multi-user trails are present in the project area, including the Mallards Slough Trail, portions of the San Francisco Bay Trail, and other trails. The Guadalupe River Trail and portions of the Bay Trail provide access to the project site. The project site also includes one observation platform and a bench. Figure 13 provides an overview of the existing public access and recreation facilities in the project area.

Under existing conditions, a loop trail extends around Ponds A9 through A15, with an interior trail also existing between A15, A13 and A14 (Figure 13). These trails can be accessed from the Alviso Marina or via a spur that crosses the railroad tracks between Ponds A16 and A15. Construction of the new flood risk management levee and salt pond modifications would affect use and access to trails that follow the existing pond dikes. For instance, outboard pond dike breaches would interrupt pond perimeter trails, severing existing connectivity. Temporary loop trails around ponds not scheduled for breaching until a later phase may be made available to the public by USFWS refuge staff over the 14-year window of pond restoration construction. Depending on the extent to which berms are being used by birds for nesting and the current availability of alternative nesting site options nearby, any new trail alignments will be decided post-breach with the goal of providing wildlife-oriented public access but also minimizing public impacts on wildlife. Around Ponds A9 through A15, the only trails that would remain following the completion of tidal restoration would consist of short segments in the eastern part of this group of ponds, as shown on Figure 13 and Figure 14. The long-term strategy development would continue with refuge and SBSPRP staff, and the final plan will include consideration for both the broader San Francisco Bay Trail Plan and public input received.

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[1] According to www.baytrail.org, when complete, the Bay Trail will be a continuous 500-mile recreational corridor that will encircle the entire Bay Area, connecting communities to each other and to the Bay. It will link the shorelines of all nine counties in the Bay Area and 47 of its cities. As of July 22, 2014, baytrail.org indicates that 330 miles of the Bay Trail, or more than 60 percent of its ultimate length, have been developed.

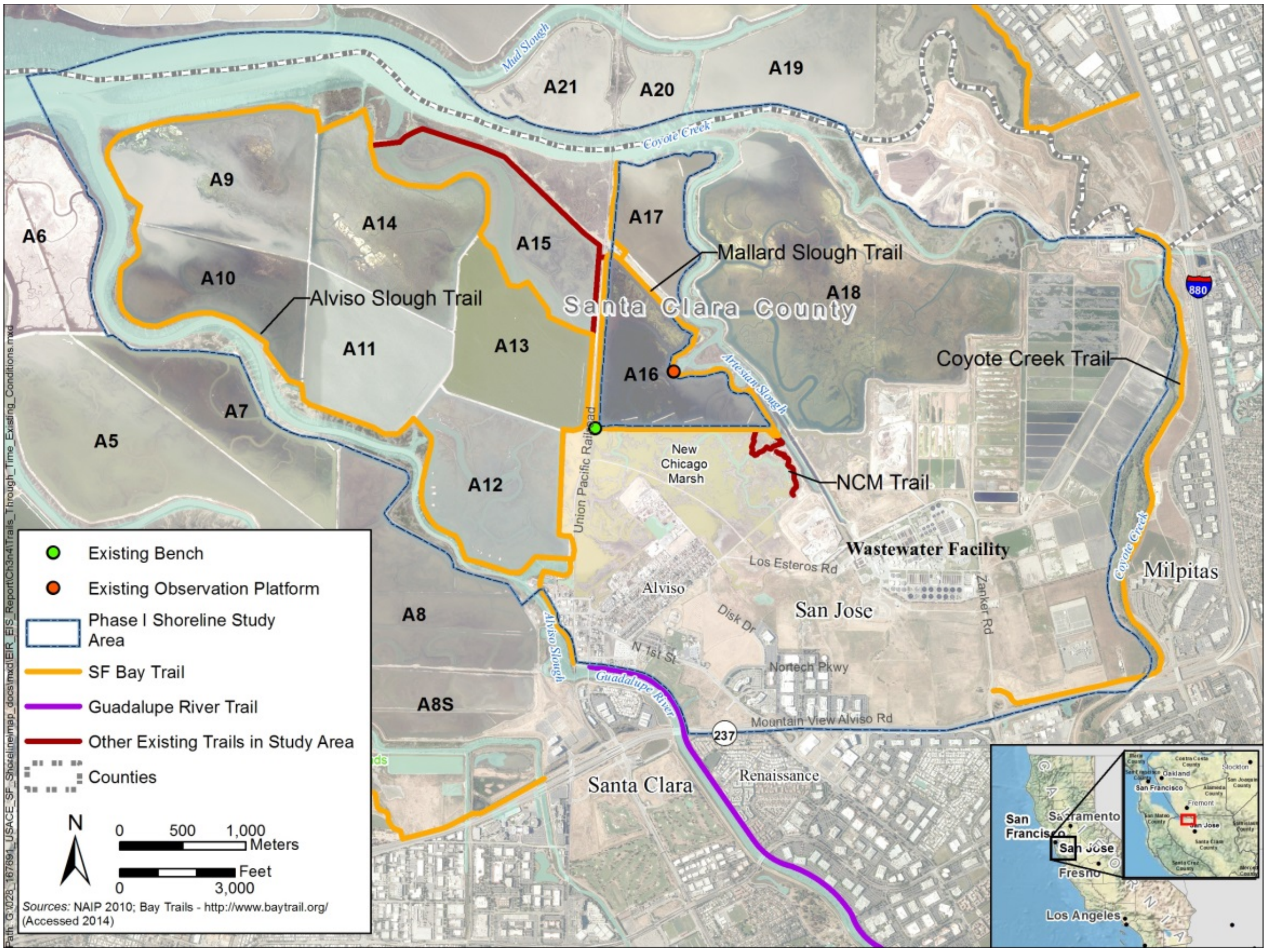
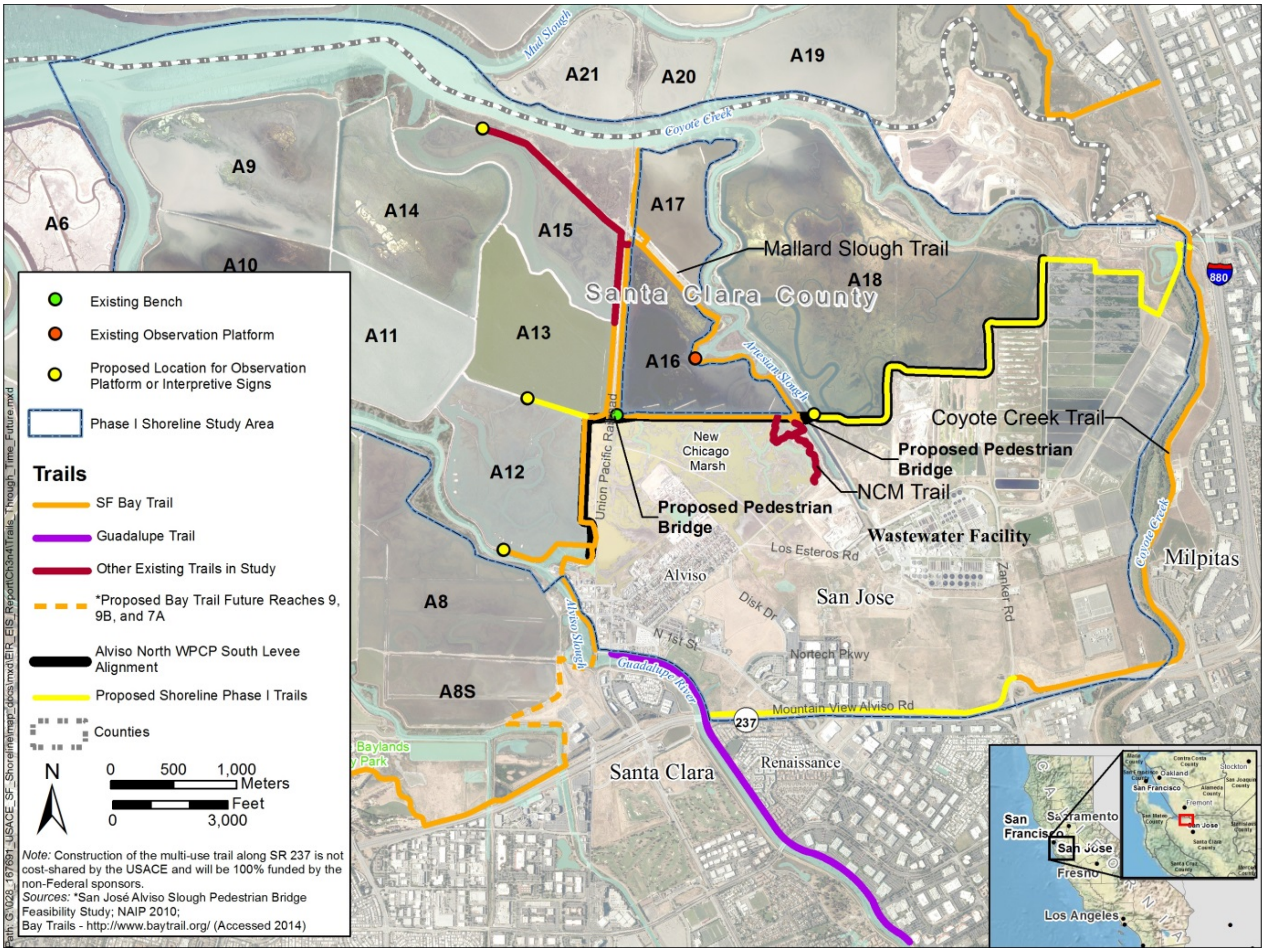


Figure 13: Existing Public Access and Recreational Features in the Project Area

The proposed public access and recreation features associated with the South Bay Shoreline Phase I project are shown in Figure 14. The proposed project includes two pedestrian bridges. One bridge would be constructed across Artesian Slough to connect the Alviso and Wastewater Facility levee segments. This connection would better accommodate pedestrian use of existing and planned trails in the refuge and would provide connectivity to trails east of the Wastewater Facility, including the Coyote Creek Trail (a segment of the Bay Trail).

The refuge trail network would also use the second new bridge, which would be constructed over the Union Pacific Railroad tracks near the northeast corner of Pond A12 and southwest corner of Pond A16. The bridge would be 380-foot-long by 10-foot-wide spanning the flood gate. The bridge would be supported on steel pipe columns to provide rail car clearance. Installing the gate and bridge would not directly affect any surface waters. The railroad bridge would provide continuous pedestrian access in the Refuge, provide connectivity to the Alviso Marina, and, eventually, provide connectivity to the Bay Trail network as sections of the Bay Trail are constructed by others.



Note: Construction of the multi-use trail along SR 237 is not cost-shared by the USACE and will be 100% funded by the non-Federal sponsors.

Sources: *San José Alviso Slough Pedestrian Bridge Feasibility Study; NAIP 2010; Bay Trails - http://www.baytrail.org/ (Accessed 2014)

Figure 14: South Bay Shoreline Phase I Proposed Public Access and Recreational Trail System

Viewing platforms, interpretive signs, and benches (for seating) would be installed in areas of the Refuge. These features would enhance the recreation experience of people using existing and planned trails in the project area. Trail connections to existing trail systems in and outside of the Refuge would continue to accommodate recreational trail use in the study area.

The project includes a new section of maintenance trail along the crest of the new WPCP segment, which will be available for pedestrian traffic. Consistent with the WPCP Master Plan, the eastern extent of the levee maintenance trail would connect to a designated route at the existing bridge at McCarthy Boulevard. The existing pedestrian walkway on the bridge would take recreationists to the Coyote Creek Trail that runs along the east bank of the creek. This proposed trail connection would be refined in final design with consideration of both public safety and the addition of features (e.g., fencing) to limit public access to sensitive wildlife areas. In addition, because the westernmost extent of the proposed levee's maintenance trail would end (with the levee itself) at existing high ground adjacent to the Alviso Marina, this would facilitate another connection to the Bay Trail if the City of San José's proposed plans to connect the Alviso Marina to the larger trail network are realized. In addition, the Project would construct a trail segment along the north side of State Route 237 between the Guadalupe River and Zanker Road (Figure 14).

In addition, because the westernmost extent of the proposed levee's maintenance trail would end (with the levee itself) at existing high ground adjacent to the Alviso Marina, this would facilitate another connection to the Bay Trail when the City of San José's proposed plans to connect the Alviso Marina to the larger trail network are realized. Final design would take into consideration any planning efforts in development at that time by the City and other local and regional authorities. To cross the active Union Pacific Railroad rail road tracks which run north to south along the west side of Ponds A16 and A17 and New Chicago Marsh, a 380-foot-long bridge (railroad bridge) is proposed with Americans with Disabilities Act-compliant approaches on each side near the northeast corner of Pond A12 and southwest corner of Pond A16.

Construction of the recreation and public access components may consist of the following activities:

- Grading and, for all-weather trails, gravel application. Equipment required for trail construction may include small, Bobcat-sized equipment, backhoes or front-end loaders, graders, bulldozers, asphalt placement equipment, and dump trucks.
- Constructing trails, including some trails designed to accommodate vehicular use, trails to provide access to a staging area, and trails for disabled access.
- Constructing interpretive stations of varying size and scope, which will include interactive features that can operate independently or can be enhanced with the assistance of docents.
- Constructing viewing platforms at vista points where important information about the landscape can be described. Viewing platforms will be made of wood, metal, or plastic material and assembled in-place using a backhoe or excavator and hand tools. Interpretive stations will be built on-site, or will be prefabricated structures. Assembly and installation will require a backhoe or excavator and hand tools.

Once construction of the recreation components is complete, the SCVWD, likely in a cooperative agreement with the City of San José, would be responsible for their operation, maintenance, repair, replacement, and rehabilitation. It is anticipated that the following operations and maintenance activities will be performed on the trails and the Artesian Slough pedestrian bridge:

- Trash and anthropogenic debris removal
- Repairs due to damage by people, small mammals, storm activities, or other factors
- Trail and bridge inspections

- Graffiti removal
- Access improvements and upkeep
- Predator and invasive species management
- Enforcement of conservation measures
- A long-term management plan will be prepared to describe the implementation of these activities.

Staging Areas

Proposed staging areas and ingress/egress routes are shown on Figure 15: Proposed Staging and Haul Routes. Potential staging areas No. 1 and No. 2 are both on WPCP land. Ingress and egress truck routes for these two areas are proposed on existing levee roads used currently by WPCP for materials hauling. Potential staging area No. 3 is on Zanker Landfill land and would be restricted in use for dirt stockpiling only. All staging areas are outside of BCDC jurisdiction.

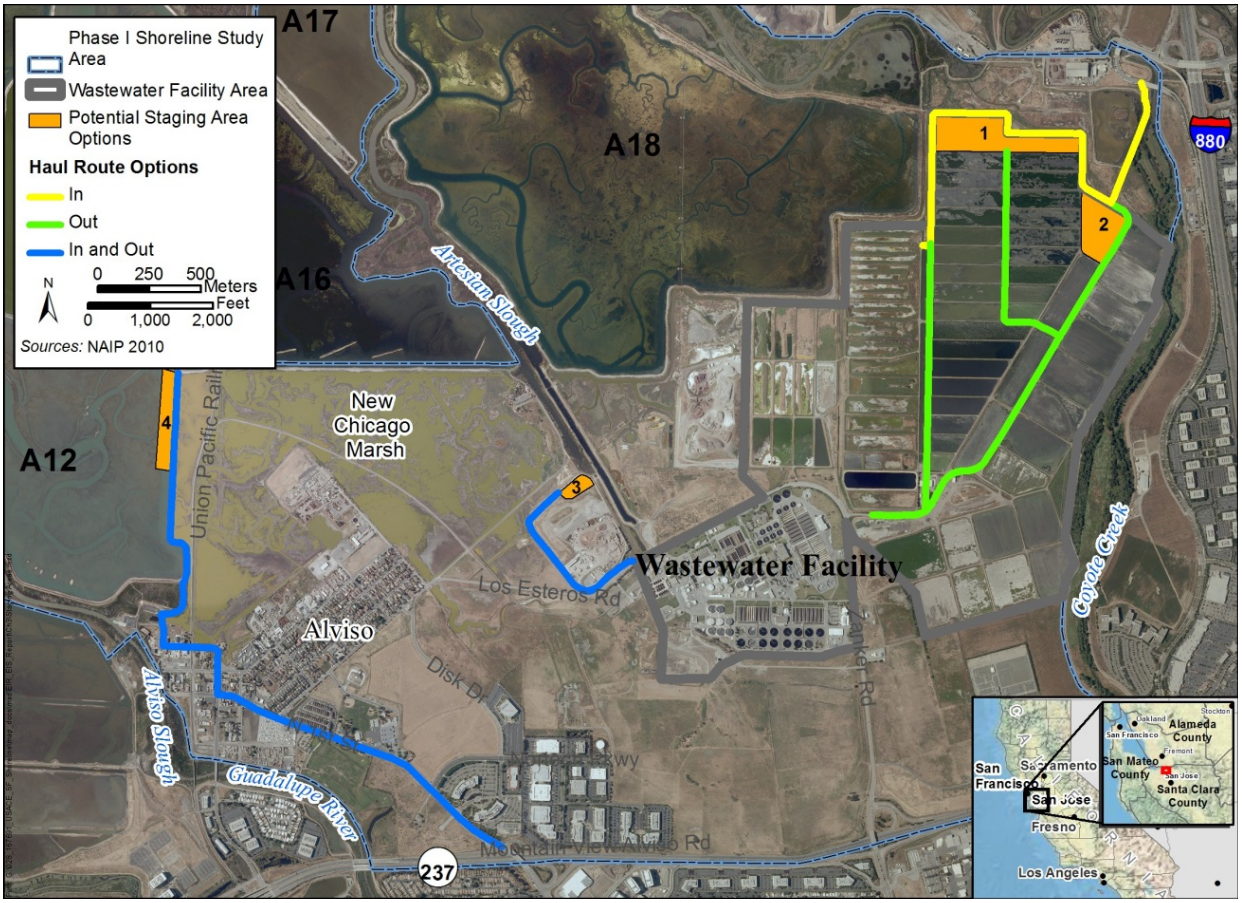


Figure 15: Proposed Staging and Haul Routes

Monitoring and Adaptive Management

Monitoring and adaptive management would be an integral component of proposed tidal marsh restoration and allow lessons learned from other restoration actions implemented along San Francisco Bay (for example, by the USFWS on refuge lands or by the SBSPRP) to be incorporated as management plans are updated and the designs of future actions are developed and implemented. This implementation approach acknowledges that risks and uncertainty exist and provides a framework for adjusting management decisions as the cause-and-effect linkages between management actions and the physical and biological response of the system become apparent. A key aspect of the adaptive management approach would be to avoid adverse environmental impacts by triggering specific preplanned intervention measures if monitoring of nearby restoration actions reveals that the ecosystem is evolving (or is responding to prior interventions) along an undesirable trajectory. The MAMP is located in Appendix F.

Monitoring and adaptive management for the project falls into three categories: (1) monitoring and adaptive management associated with meeting ecosystem restoration objectives, (2) monitoring and adaptive management associated with "adaptive implementation" (i.e., decisions about whether to continue or halt the restoration of tidal marsh habitat depending on the monitoring of the effects of pond-to-marsh conversion), and (3) monitoring and adaptive management associated with permit compliance. The USACE will cost-share activities associated with meeting ecosystem restoration objectives, for a period of 10 years. The Shoreline Study MAMP includes a discussion of monitoring and adaptive management scientific basis and institutional structure, specific MAM activities, and cost estimates. Because the Phase I Study Project includes a subset of ponds within the SBSPRP, the MAMP for the Phase I Study Project draws heavily from the monitoring and applied studies being conducted by the larger SBSPRP. Monitoring activities to be funded by the USACE include the following:

- Water levels, sediment accretion rates, and suspended sediment concentrations
- Tidal marsh habitat acreage
- Presence and abundance of California Ridgway's rails and salt marsh harvest mice in newly established tidal habitat; given the length of time that may be required for suitable habitat for these species to become established, it is possible that this monitoring may not occur within the 10-year period of USACE cost-shared monitoring, although harvest mice may occupy the ecotone within 10 years
- Abundance and health of estuarine fish
- Count of migrating salmonids
- Abundance of non-native plants
- Plant species composition in upland transition zones
- Mammalian and avian predators of California Ridgway's rails and salt marsh harvest mice

Monitoring and adaptive management is most important for the USFWS actions, which involve phased restoration and thus provide the opportunity for activities in earlier phases to inform those in later phases. Tidal restoration of Pond A12 and A18 will not be phased; thus, adaptive management will not apply to restoration actions in this pond as it would to phased restoration. Nevertheless, monitoring of the progress of tidal restoration in Pond A18 will occur, which will help to inform subsequent phases of restoration on refuge lands.

Project Construction and Monitoring Schedule and Phasing

The Shoreline Phase I Study timeline includes a 50-year period of analysis once construction is complete (2021–2071). Levee and ecotone construction is expected to begin in 2018 and persist through 2021. Outboard levee breaching and site restoration is expected to being in 2020. Monitoring and adaptive management of the pond restoration would continue throughout the 50-year period of analysis.

Following levee and ecotone construction, Ponds A12 and A18 would be prepared for breaching. The first breach is scheduled for 2021, followed by monitoring and adaptive management to inform the next potential phases of restoration. This period of monitoring and adaptive management would also be used to inform potential adjustments to Ponds A12 and A18 and may extend beyond this 4-year period. The second phase of pond preparation and breaching (Ponds A9-A11) would occur in 2025, assuming that monitoring results from the previous phase indicate that tidal marsh restoration should proceed, and would also be followed by a similar period of monitoring and adaptive management. The last phase of pond preparation and breaching would occur in 2030 and would be followed by continued monitoring and adaptive management for all areas. Maintenance (e.g., of levees and trails) and management according to a long-term management plan will continue throughout the life of the project. The exact timing and duration of construction will be governed by both weather conditions and the need to avoid construction in sensitive areas during certain times of the year to avoid and minimize impacts to listed species. The overall construction and monitoring schedule is shown on Figure 16: Shoreline Phase I Construction Schedule.

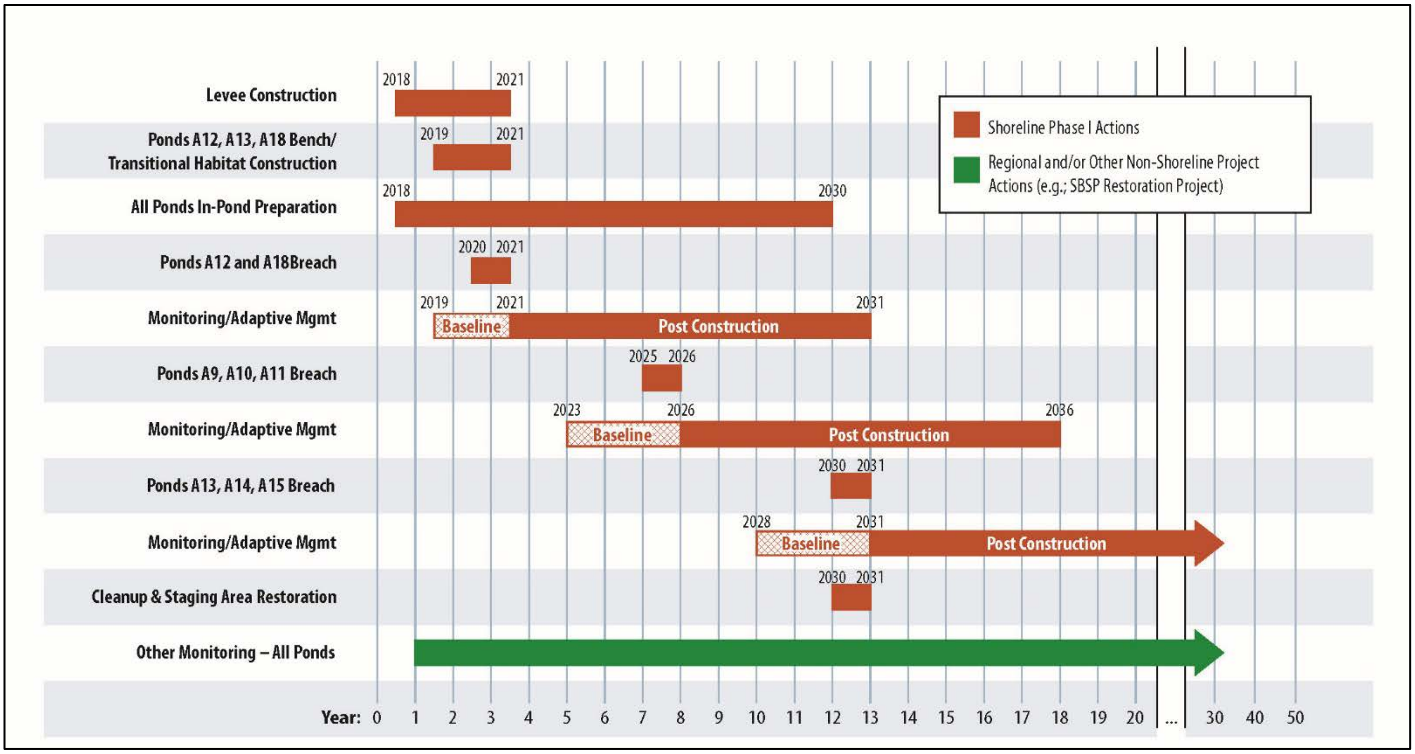


Figure 16: Shoreline Phase I Construction Schedule

Typical Construction Equipment

Typical construction equipment includes excavators, belly scrapers, front-end loaders, bulldozers, forklifts, vibratory rollers, dump trucks, and water trucks. Ancillary types of equipment that may be used include diesel generators, water pumps, and pile drivers. It is anticipated that dewatering and temporary installation of sheet piling will be necessary during the construction of water control structures such as tide gates. Dredge-locks or coffer dams may be constructed using earth levees or sheet piling to allow access for water-based equipment within a site. When possible, amphibious excavators, vibratory pile drivers, and other less-impacting equipment will be used.

Post-Construction Operations and Maintenance

Following completion of project construction, any remaining staging areas and/or temporary easement locations would be restored to preconstruction conditions or upgraded to be consistent with the goals of the project (e.g., native plant seeding).

The California State Coastal Conservancy and Santa Clara Valley Water District would be responsible for the operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) of Pond A18 tidal restoration and ecotone, as well as the entire levee both adjacent to Pond A18 and on refuge property. The USFWS would be responsible for operations and maintenance of its land on the refuge. An OMRR&R manual will be prepared to describe these activities.

Following the breaching of levees, management activities that might occur within the restored tidal habitats are predator management and, if necessary, invasive plant management, both of which would be performed on an as-needed basis. If monitoring determines that predator management is necessary to protect special-status and sensitive species, such as California Ridgway's rails and salt marsh harvest mice, from predators such as California gulls (*Larus californicus*), northern harriers (*Circus cyaneus*), American crows (*Corvus brachyrhynchos*), common ravens (*Corvus corax*), red foxes (*Vulpes vulpes*), striped skunks (*Mephitis mephitis*), feral cats (*Felis catus*), and raccoons (*Procyon lotor*), then adaptive predator management would be implemented.

Predator management would be focused on specific areas where predation problems are occurring (or areas, such as poles or towers, used as nesting sites or hunting perches by raptors), and culling would be limited to certain individuals; target mammalian predators that are captured would be lethally removed, while target avian predators would be either lethally removed (e.g., crows and ravens) or relocated (e.g., raptors). Invasive plant management will be needed for the first few years following construction of the ecotone to ensure that perennial pepperweed and other invasive species do not become dominant. Otherwise, invasive plant management would be performed if monitoring indicates that particularly invasive species colonize in the tidal areas in a way that would jeopardize the habitat enhancements achieved through tidal restoration.

It is anticipated that the following OMRR&R activities will be performed on the flood risk management levees:

- Trash and anthropogenic debris removal along levee slopes and where it is causing obstruction in culverts or other problems
- Repairs on levee due to damage by small burrowing mammals, runoff/erosion, storm activities, or other factors
- Repairs along concrete flood wall structures (if included in plan) and other features, such as bridges and culverts
- Levee inspections conducted by SCVWD and USACE
- Graffiti removal
- Access improvements and upkeep
- Vector monitoring (presence of mosquitoes and their larvae)
- Vegetation management – The levee design will include vegetation as erosion protection on the bayward and landward side slopes. Combinations of buried stone protection and buried gravel may be used to stunt the growth of native vegetation to reduce the frequency of mowing in this environmentally sensitive area, or to provide erosion protection where vegetation cannot be supported. It is anticipated that a reduced need for regular mowing will still include annual mowing of the levee side slopes within 12 to 15 feet of the levee crown. Such a narrow swath of vegetation management would likely require only two or three passes of a mower, once per year, which would minimize the disturbance of sensitive species in adjacent areas. Mowing would proceed from the top (closest to the crown, where habitat is of lowest quality) downward toward higher-quality habitat so that if any wildlife

is using the area to be mown, the noise and movement of the mower may encourage wildlife to move down slope into the higher-quality habitat and out of the impact area. This area of mowing would correspond to the area above elevation 9 feet on the levee side slopes and higher elevations in reaches with ecotone fills.

No woody plant species greater than 2 inches in diameter will be allowed to become established on the levees to prevent roots from damaging the structural integrity of the levee. Due to salinity levels in lower-elevation areas, there is a low likelihood of woody vegetation establishment in many areas. Any woody vegetation that germinates in the higher-elevation mowing zone will be managed by mowing. Below the mowing zone, any woody plant removal that becomes necessary will be performed by hand; such hand-removal is expected to be necessary very infrequently (e.g., once every few years, at most).

- Burrowing mammal management – California ground squirrels (*Spermophilus beecheyi*) may burrow into levees deep enough to affect the structural integrity of the levees, and thus squirrel management may be necessary. Ground squirrels are uncommon along the existing levees in the Project area and are thus not expected to require frequent or intensive management efforts. If ground squirrel management becomes necessary, it will be implemented using live traps with screens that have holes large enough to allow small mammals such as salt marsh harvest mice to easily exit the traps. Any mammals caught during such trapping that are potential predators of the salt marsh harvest mouse or California Ridgway's rail, such as rats (*Rattus* spp.), striped skunks (*Mephitis mephitis*), red foxes (*Vulpes vulpes*), feral cats (*Felis catus*), raccoons (*Procyon lotor*), or opossums (*Didelphis virginiana*) will be lethally removed.

Permanent Effects of the Proposed Fill and Construction Activities on BCDC Jurisdictional Habitat and other Habitat

Permanent direct effects would occur as a result of the new levee footprint. Some of the habitats that would be directly affected are waters of the United States, and the levee construction would result in a discharge of fill material to these waters. The numbers presented in Table 4 also include direct temporary impacts within construction easements. These easements might remain disturbed over time depending on their proximity to other developed areas and whether they might be used for long-term levee maintenance activities. For the purpose of providing a conservative analysis, all impact acreages, whether permanent or temporary, presented in Table 4.

Table 4: Existing Habitat and Habitat Impacts from Levee Construction and Restoration Actions by Levee Segment and Alternative

Habitat Type	Existing Habitat (acre)	Habitat Affected by the Project			
		Alviso Segment (acre)	WPCP Segment (acre)	Total (acre)	Percent of Habitat Affected
Brackish marsh [a]	432.2	0.2	0.1	0.3	0.07%
Freshwater marsh [a]	93.2	0.8	0.3	1.1	1.18%
Muted tidal/diked marsh [a]	340.1	1.8	0.0	1.8	0.53%
Tidal salt marsh [a]	322.0	0.0	0.0	0	0.53%
Non-tidal salt marsh [a]	85.4	3.7	8.2	11.9	9.60%
Seasonal wetlands [a]	26.2	0.6	0.0	0.6	16.03%
Mudflat [a]	220.4	8.8	0.0	8.8	0.18%
Total Wetland	**1,519.5**	**8.8**	**8.6**	**24.5**	**1.16%**
Batch pond [a]	826.1	32.6	0.0	32.6	3.95%
Circulation pond [a]	2061.7	4.9	73.3	78.2	3.79%
Open water [a]	357.8	0.8	8.6	9.4	2.63%
Riparian / creek corridor [a]	17.6	0.0	0.0	0	0.00%
Total Open Waters	**3,263.2**	**38.3**	**81.9**	**120.2**	**3.68%**
Total Aquatic Area	**4,782.7**	**47.1**	**90.5**	**144.7**	**3.03%**
Upland habitat [b]	829.6	0.0	1.0	1	0.12%
Water/sewage treatment [b]	964.0	0.0	0.1	0.1	0.01%
Levee [b]	138.8	9.2	10.5	19.7	14.19%
Developed [b]	577.0	6.3	0.1	6.4	1.11%
Landfill [b]	158.5	0.0	0.0	0	0.00%
Total Other	**2,667.9**	**15.5**	**11.7**	**27.2**	**1.02%**
Total Area	**7,450.6**	**62.7**	**102.2**	**171.9**	**3.95%**

Sources: H.T. Harvey & Associates 2013; City of San José 2013a

3.15.2 Existing Conditions of the Site

Habitat types within the Study Area are depicted on Figure 16. Tidal marshes along both Alviso Slough and Coyote Slough are fresh/brackish in their upper reaches, where they are dominated by California bulrush (*Schoenoplectus californicus*), alkali bulrush (*Bolboschoenus maritimus subsp. paludosus*), cattails (*Typha spp.*), and perennial pepperweed (*Lepidium latifolium*), but this vegetation transitions into salt marsh species such as Pacific cordgrass (*Spartina foliosa*), pickleweed (*Salicornia pacifica*), and marsh gumplant (*Grindelia stricta*) toward the downstream portions of these sloughs. Artesian Slough, into which the WPCP discharges treated wastewater, is dominated primarily by freshwater marsh, which transitions to brackish marsh toward its confluence with Coyote Slough. Marshes along all three of these sloughs are relatively narrow and thus, in most places, lack the extensive channel networks that characterize larger marshes. Pond A17 has only recently been opened to tidal action, and thus rather than being vegetated, is inundated during the higher portion of the tidal cycle and consists mostly of mudflat at low tide; eventually, it is expected and intended that A17 will be dominated by tidal marsh. New Chicago Marsh is a diked, muted tidal salt marsh dominated by pickleweed, saltgrass (*Distichlis spicata*), jaumea (*Jaumea carnosa*), and other halophytes in some areas, but with extensive open water and salt panne habitat as well.

Ponds A9, A10, A11, A14, A16, and A18 are managed ponds, with varying water depths and salinities similar to or slightly higher than bay salinities. Ponds A9, A10, A11, and A14 are joined by breaches in their levees; water control structures along Alviso Slough at Pond A9 and Coyote Slough at Pond A14 allow water to enter these ponds. Ponds A12, A13, and A15 are also managed ponds, but are referred to as "batch ponds", because they are managed for higher salinities. Pond A16, which will be a managed pond under the SBSPRP, receives water from Pond A17 through a control structure, and water flows out of A16 through another structure in its southeastern corner; a structure along the southern edge of Pond A16 allows water to discharge into New Chicago Marsh as well. Pond A18 is not managed in concert with the other ponds; water in this pond is managed via two control structures, one in the northwest and one in the southwest portion of the pond. Currently, all managed and batch ponds on Refuge lands (A9-A15) are managed primarily as habitat for pond-associated waterbirds; Pond A18 is managed to maintain ambient conditions, with ancillary benefits to waterbirds. The Study Area also includes developed areas associated with the community of Alviso and an electrical generation plant, landfills, the WPCP water/sewage treatment areas, and upland grassland/ruderal habitat in the WPCP buffer lands.

3.15.3 Bathymetric Features, Tidal Hydrology, and Sedimentation

Bathymetry

In the project vicinity, South Bay bathymetry is considered to generally be a large, shallow basin. The basin has a relict channel that is currently inundated. Within the South Bay, the underwater channels remain largely in its natural state. The areas surrounding the underwater channel are broad and characterized by shallows where mudflats and tidal marsh occur (HDR 2014). The intertidal areas (between mean high and low tide) contain a network of small, branching channels that effectively drain the South Bay at low water, leaving an expanse of exposed mudflats in the lower intertidal areas (HDR 2014). The average depth of the South Bay is less than 13 feet, and the main channel depths range between 33 to 50 feet (HDR 2014). The tidal elevations for the project area are shown in the Table 5 below.

Table 5: Water Elevations under Intermediate Sea Level Rise Scenario

Tide Level	Current Elevation (feet NAVD88)	2017 Elevation (feet NAVD88)	2067 Elevation (feet NAVD88)
MHHW	7.64	7.86	8.65
MHW	6.99	7.21	8.00
MTL	3.48	3.70	4.49
MLW	-0.07	0.15	1.68
MLLW	-1.35	-1.13	0.4

Tides

Tides move through the narrow opening at the Golden Gate Bridge but are modified by bottom bathymetry, the shoreline, and the Earth's rotation as they move through the San Francisco Bay estuary. The enclosed nature of the South Bay creates a mix of progressive and standing-wave behavior for tides, meaning these waves are reflected back on themselves (Walters et al. 1985), causing an amplification of the tides and an increase in tidal range with distance from the Golden Gate Bridge, the area from which the bay opens to the open ocean. Tides in San Francisco Bay are mixed semidiurnal, with two high and two low tides of unequal heights each day. The tides exhibit strong spring-neap variability, with the spring tides (larger tidal range) occurring approximately every 2 weeks during the full and new moons. Neap tides (smaller tidal range) occur approximately every 2 weeks during the moon's quarter phases. The tides also vary on an annual cycle in which the strongest spring tides occur in late spring and early summer and then late fall and early winter, and the weakest neap tides occur in spring and fall.

Circulation

Currents in the South Bay are driven predominantly by tidal- and wind-driven flows and their interaction with the South Bay's bathymetry. These interactions create a series of four circular water movement patterns in the South Bay, located (1) north of the San Bruno shoal (i.e., the shallow region in the South Bay northwest of the San Mateo Bridge), (2) between the San Bruno shoal and San Mateo Bridge, (3) between the San Mateo Bridge and Dumbarton Bridge, and (4) south of Dumbarton Bridge (Cheng and Gartner 1985; Powell et al. 1986).

These currents affect the tidal excursion—the horizontal distance a water particle travels during a single flood or ebb tide—which differs between the channel and the shoals in the South Bay (Walters et al. 1985). In the channel, the tidal excursion varies between 6.2 and 12.4 miles, and in the subtidal shoals it ranges between 1.9 and 4.8 miles, with much smaller excursions occurring on the intertidal mudflats (Cheng et al. 1993; Fischer and Lawrence 1983; Walters et al. 1985). Tidal excursions exhibit strong spring-neap variability, especially in the channel where tidal excursions on the spring tides can be double those on neap tides.

Residual currents in the South Bay are primarily a product of meteorological events, wind-driven and density-driven circulation patterns. Winds alter water circulation when able to blow over a long, unobstructed distance, or "fetch" (Krone 1979). Typically, winds drive a surface flow, which then induces a return flow in deeper channels (Walters et al. 1985). In terms of circulation, the most significant winds are onshore breezes that create a horizontal clockwise circulation pattern during spring and summer. Density-driven currents occur when adjacent water bodies have differing densities, such as differences in temperature and/or salinity. Although density-driven currents are generally uncommon in the South Bay, in years of heavy rainfall, freshwater can flow from the Sacramento–San Joaquin Delta through the Central San Francisco Bay (Central Bay) and into the South Bay (Walters et al. 1985). In such events, freshwater flows southward along the surface, while the more saline South Bay water flows northward along the bottom.

Sediment Transport

Suspended solids concentration (SSC) in the South Bay exhibits highly dynamic short-term variability, primarily in response to sediment input from tributaries and sloughs and to tidally driven and wind-driven re-suspension (Cloern et al. 1989; Powell et al. 1989; Schoellhamer 1996). SSCs are temporally variable on tidal and seasonal scales and exhibit strong diurnal and spring-neap variability, with the highest SSCs occurring on spring tides. On a seasonal time scale, SSCs are higher in the summer months when average wind speeds and wind-wave action are greatest. Greater wind-wave action increases re-suspension and reworking of the sediment deposited during the previous winter months. Wind is the most dynamic factor affecting temporal and spatial variability in SSCs (May et al. 2003). In general, increases in fetch and wind speed will result in larger wind waves, and, in the South Bay's broad shoals, these wind waves re-suspend sediments, creating more turbid conditions.

Lateral exchange is also an important mechanism for sediment transport (Jassby et al. 1996; Schoellhamer 1996). Lateral surface flows (between the channel and shoal) result from differing velocities in the channel relative to the shoals and the interaction of tidal flow with channel-shoal bathymetry. These lateral flows can transport a significant amount of sediment to the channel (Jassby et al. 1996), which can in turn lead to an export of sediment to the Central Bay. Suspended solids are typically higher near the bed than at mid-depth and decrease with northward distance from the far South Bay (PWA et al. 2005). Measurements in the Guadalupe River near San José between 1979 and 1992 (PWA et al. 2005) and near U.S. Highway 101 in 2002 (Schoellhamer pers. comm. 2005) indicate that suspended solids are strongly correlated with discharge, with higher suspended solids found during times of higher discharge.

The sediment historically deposited within the Alviso pond complex is a mix of sand, silt, and clay. The USGS collected sediment data between April and June 2003 indicating that the sediments on the pond bottoms within the Alviso pond complex are composed of 38 percent sand, 36 percent silt, and 26 percent clay (USGS 2005a). Grain size distributions show a marked difference from those of area sloughs, where channels are composed of 13 percent sand, 54 percent silt, and 33 percent clay (USGS 2005a).

The rate of sedimentation in natural and restored marshes depends on sediment supply in the water column, settling velocities, and the period of marsh inundation. Rates of sedimentation decrease over time as mudflats and marsh plains accrete and the period of tidal inundation decreases. Sedimentation rates near the Alviso pond complex are generally higher at present than those near the Eden Landing and Ravenswood pond complexes because of higher suspended sediment concentrations (sediment availability) and higher average sedimentation rates; historically, this was due to subsidence. Subsidence of land relative to water levels in the South Bay moderates sedimentation deceleration by maintaining low land elevations (relative to tidal water levels). This subsequently results in higher average sedimentation rates over specific periods of time.

The sedimentation within the former salt ponds has not kept pace with past subsidence due to the reduced sediment supply to the ponds by the management operations. Consequently, the average elevation within the former salt ponds is several feet lower than the elevations of the adjacent wetlands just outside of the outboard levees.

The other primary sediment source to the far South Bay is sediment inflow from the Central Bay. Sediment can be exchanged with the Central Bay via any of four primary transport pathways:

- Advective transport associated with tidal residual currents
- Advective transport associated with wind-driven circulation
- Advective transport associated with baroclinic residual circulation
- Dispersive transport associated with tidal movement coupled with horizontal gradients in sediment concentration

Sediment exchange between the South and Central Bays is governed by the relative strength of each of these pathways together with the available suspended sediment supply associated with each of the bays. This complicated exchange is difficult to quantify. Reliable long-term measurements of these exchanges do not exist, and estimating the quantity of sediment passing under the Golden Gate Bridge (and hence bypassing this exchange pathway) is problematic.

3.15.4 Endangered or Threatened Species

A list of endangered, threatened, proposed, and candidate species in Santa Clara County was generated from the USFWS's Sacramento Office website on July 10, 2014. Based on this list; the biological opinion issued by the USFWS and NMFS for the SBSPRP (USFWS 2008, NMFS 2009a); a review of relevant literature (including the Project's Integrated Document); database searches (such as review of California Natural Diversity Database [CNDDB 2014] data); and other available information, H. T. Harvey & Associates (HTH) biologists identified the following federal or state threatened, endangered, candidate, or fully protected species that occur or potentially occur within the action area:

- California Ridgway's rail (*Rallus longirostris obsoletus*), listed as federally endangered, state endangered and a state fully protected species
- California black rail (*Laterallus jamaicensis coturniculus*), listed as state threatened and a state fully protected species
- Western snowy plover (*Charadrius nivosus nivosus*), listed as federally threatened
- California least tern (*Sternula antillarum browni*), listed as federally endangered and state endangered
- Bald eagle (*Haliaeetus leucocephalus*), listed as state endangered
- Salt marsh harvest mouse (*Reithrodontomys raviventris*), listed as federally endangered, state endangered and a state fully protected species
- Steelhead (*Oncorhynchus mykiss*), Central California Coast Distinct Population Segment (DPS; CCC steelhead), listed as federally threatened
- Green sturgeon (*Acipenser medirostris*) southern DPS (southern green sturgeon), listed as federally threatened
- Longfin smelt (*Spirinchus thaleichthys*), San Francisco Bay Delta DPS, listed as a federal candidate species and state threatened

The USFWS issued a biological opinion for this project on April 27, 2015. The NMFS issued a not likely to adversely affect concurrence letter on May 19, 2015. Coordination with the CDFW is ongoing.

3.15.5 Subtidal Areas

No scarce subtidal areas or areas with an abundance and diversity of aquatic organisms or wildlife are present. The majority of the levee construction site supports diked salt ponds such that the tidal influence is limited. The slough channels contain subtidal habitat that are part of what is considered to be essential fish habitat.

3.15.6 Potential for Project to Release Pollutants or Accidental Spills into the Bay

This section discusses whether the project would involve the release of pollutants or have the potential for accidental pollutant discharge into the Bay. For areas where there is a potential to release pollutants into the Bay, it discusses design features that would minimize or avoid discharging pollutants into the Bay.

Mercury

It is well known that the Guadalupe River system, including Alviso Slough, has a relatively high concentration of mercury resulting from sediments washed from historical mercury mines in the upper watershed. Recent testing in Artesian Slough has revealed high mercury concentrations there as well, with total mercury being lower but methylmercury, the bioavailable form, being higher in Artesian Slough than Alviso Slough (City of San José 2013). Such mercury may be mobilized when pilot channels are excavated in outboard marshes along Artesian Slough prior to breaching, and the tidal action through those channels, as well as the increase in tidal prism and associated scour of sediments in Artesian Slough, could mobilize mercury-laden sediment from the slough. Mercury could also be mobilized downstream into and along Coyote Slough.

Mercury is taken in by wildlife primarily through prey contaminated with methylmercury. Methylmercury, unlike elemental mercury, is bioavailable in that it readily binds to living tissue and accumulates in aquatic food webs. Inorganic mercury tends to be converted to methylmercury, primarily under somewhat anoxic conditions (Marvin-DiPasquale et al. 2003). Wildlife are currently exposed to methylmercury when foraging on mudflats and in sloughs with high levels of mercury contamination. The project has the potential to increase the exposure of wildlife to mercury by stirring up sediments during vegetation removal and dredging activities. Mercury-contaminated sediments that are currently buried too deep to adversely affect some wildlife could be mobilized by these activities, thus entering the food chain. The extent to which excavation of pilot channels and scour of sediments in Artesian Slough will release mercury such that it may more bioavailable to wildlife, and to which any increased level of bioavailable mercury affects wildlife, is difficult to quantify.

Compared to a managed pond environment, mercury deposited in well-oxygenated marsh plains is not expected to methylate as readily (Grenier et al. 2010). Also, it is likely that there will be a relatively low temporal exposure after breaching occurs for mercury to circulate in the slough or restored ponds, methylate, and be incorporated into the food web. Therefore, if there is an increase in methylmercury, it will likely occur for only a short duration. Preliminary data collected for SBSPRP mercury monitoring suggest this is the case. Mercury levels in fish collected in Alviso Slough increased after the Pond A8 notch was opened in June 2011 but had already decreased by October 2011 (SBSPRP 2013). The increase in mercury levels was more pronounced around the notch than at downstream sampling locations, suggesting the effect was localized. Therefore, the loss of individual Ridgway's rails or reduction in reproductive success of rails is not expected to occur as a result of increased mercury exposure associated with the project.

Mercury in sediments could be exposed or remobilized and his mercury could be accumulated by fish, including CCC steelhead migrating through the project area or using restored marshes, either through aqueous exposure or consumption of mercury-contaminated prey. Methylmercury in particular is toxic to aquatic organisms. Methylmercury is produced in aquatic ecosystems by the methylation of inorganic mercury by microorganisms; the degree to which methylation occurs depends on physical, chemical and biological conditions (Benoit et al. 2003). Considering that specific conditions are required for methylation to occur, high concentrations of mercury do not necessarily result in high concentrations of methylmercury (LASC 2010). In fish practically all organic mercury occurs as methylmercury. It readily crosses the blood brain barrier, and due to its lipophilic character accumulates in the nervous system (Baartrup 1991). However, fish generally accumulate mercury through their diet rather than by exposure to aqueous concentrations (Scheuhammer et al. 2007). Although adult CCC steelhead migrations to natal streams are generally non-feeding migrations, outmigrating juvenile CCC steelhead engage in active foraging and may ingest mercury while feeding in the slough. The direct and indirect effects of methylmercury on fish, in general, are not well understood (Scheuhammer et al. 2007).

The exposure of CCC steelhead to sediments containing legacy mercury will be minimized during the project by 1) the brief period of disturbance; 2) coordinating sediment disturbance to occur during periods when CCC steelhead are least likely to be in the project area; and 3) the short duration of CCC steelhead presence in the Action Area. Exposure is not likely to result in substantial effects on CCC steelhead or to result in greater bioaccumulation of mercury than currently exists in the vicinity.

Fill Materials

The project intends to source fill materials from upland sites. Fill materials to construct the project flood risk management levees and ecotone levees are anticipated to come from unrelated local projects where upland excavation materials have been generated. Rather disposing these materials at a landfill, the material would be used as levee fill. The majority of the fill is expected to come from upland sites; however some dredge material associated from the SCVWD Stream Maintenance Program may also be used as source material. Dredge material originating from areas outside the project area that is used for ditch blocks, or for portions of the ecotone and flood risk management levee that will be in contact with tidal waters, will need to meet the screening criteria outlined the San Francisco Bay Regional Water Quality Control Board report on the beneficial reuse of dredged materials (SFB-RWQCB 2000), which is indicated in Table 2Table 3 and 2, above.

Herbicides

If perennial pepperweed control is necessary, spraying with glyphosate or imazapyr formulated for aquatic use may be necessary, as described by Hogle et al. (2007) for the San Pablo Bay National Wildlife Refuge. The NMFS assessed the potential effects of aquatic-formulated glyphosate and imazapyr for aquatic restoration activities in Oregon and Washington, determining that when appropriately applied, these herbicides were not likely to adversely affect listed salmonids (NMFS 2013). As a result, application of these herbicides, if necessary, to control pepperweed on the A12 and A18 ecotones or in Pond A18 following restoration, in accordance with the methods of Hogle et al. (2007), would not result in adverse effects on CCC steelhead.

3.15.7 Suspected or Known Contaminations

Only two contaminated sites have the potential to impact future construction activities and four sites are not likely to affect future construction activities in the proposed Shoreline Phase I construction areas (Table 6). Nine sites were identified as having hazardous materials, see the Project EIR (HDR 2014) for further details.

Table 6: Hazardous Materials Sites Near the Project Site

Site Name	Approximate Distance to	Potential Impact

	Proposed Levee	
San José– Santa Clara Regional Wastewater Facility	Adjacent to Proposed Levee	Potential to affect
Zanker Material Processing Facility	0.3 mile	Potential to affect
Zanker Road Class III Landfill	Adjacent to Proposed Levee	Not likely to impact
George Maciel Trucking	0.32 mile	Not likely to impact
Newby Island Landfill	0.2 mile	Not likely to impact
South Bay Asbestos Area (Alviso Asbestos Landfill)	0.5 mile	Not likely to impact
CSJ Gold Street Storm Station	0.9 mile	Site Closed-Not likely to impact
Spreckles Road Sanitary Pump	0.5 mile	Site Closed-Not likely to impact
WD Smith Trust	0.35 mile	Site Closed-Not likely to impact

3.15.8 Water Quality Certification

Although not a requirement of the CZMA or Basin Plan, BCDC interprets section 307(f) of the CZMA (16 U.S.C. § 1456(f)) to mean that the water quality standards in the San Francisco Basin Plan (water quality plan) can be incorporated into the San Francisco Bay Play (coastal management plan). The San Francisco District is currently coordinating with the San Francisco Bay Regional Water Quality Control Board to obtain Water Quality Certification (WQC) pursuant to Section 401 of the Clean Water Act. However, Water Quality Certification will not be obtained until the pre-construction, engineering, and design phase of the project.

4.0 Consistency with the McAteer-Petris Act and Enforceable Policies of the Bay Plan

The purpose of this federal consistency determination is to determine if the proposed project is consistent to the maximum extent with the McAteer-Petris Act and enforceable policies of the San Francisco Bay Plan (http://www.bcdc.ca.gov/pdf/bayplan/bayplan.pdf). The Bay Plan details 30 separate findings and policy categories, which are provided in Part III—*The Bay as a Resource: Findings and Policies* and Part IV—*Development of the Bay and Shoreline: Findings and Policies* of the Bay Plan. Several of these are applicable to the South Bay Shoreline Phase I project and the project must be consistent to the maximum extent practicable with them. The overall objectives of the Bay Plan are listed below. The findings and policies were developed to ensure that the overall objectives for the Bay are met.

1) Protect the Bay as a great natural resource for the benefit of present and future generations.
2) Develop the Bay and its shoreline to their highest potential with a minimum of Bay filling.

In addition, the Commission has identified priority uses for specific areas of the Bay. The majority of the South Bay region surround the Bay has a priority use of wildlife refuge, with a smaller areas designated as waterfront park or beach (Figure 3). The project area is completely within the wildlife refuge priority use area. With the exception of a very small area immediate south of Pond A18, the entire project would restore tidal marsh habitat, resulting in 2,900 acres of created habitat. The restored habitat would contribute to the Don Edwards San Francisco Bay Wildlife Refuge and facilitate recreation in the refuge.

In its February 23, 2015, response comments on the draft South Bay Shoreline Phase I Environmental Impact Statement / Environmental Impact Report / Feasibility Study (Integrated Report) (December 2014), BCDC provided its initial conclusion that analysis of the project's consistency with the Commission's laws and enforceable policies should likely focus on:

- Fill in BDCD jurisdiction (McAteer-Petris Act)
- Bay Plan Salt pond policies
- Climate change
- Shoreline protection
- Safety of fills
- Tidal marshes and tidal flats
- Public access

As such, this consistency determination provides a detailed analysis on the applicable Commission laws and policies for the above-listed item. The USACE has also reviewed the Bay Plan for additional enforceable policies that must be complied with; for each applicable policy, and analysis is also provided. For each policy, the project must be fully consistent except for where policies are prohibited by applicable federal law (15 CFR 930.32). Should the project not be fully consistent with the policy, the applicable law preventing consistency is also provided.

In each subsection, a specific Commission law or enforceable policy category is provided. The specific enforceable policy(ies) for each category is described first, followed by a discussion of how the project is consistent to the maximum extent practicable. Where necessary, the reader is referred to other supporting information in this consistency determination or in the exhibits.

4.1 McAteer-Petris Bay Fill Policies

Section 66605 of the McAteer-Petris Act describes the state laws regulating fill in BCDC jurisdiction. This section has several subdivisions, of which three subdivisions are applicable to the proposed project. These subdivisions are listed below.

(c) That the water area authorized to be filled should be the minimum necessary to achieve the purpose of the fill;

(d) That the nature, location, and extent of any fill should be such that it will minimize harmful effects to the bay area, such as, the reduction or impairment of the volume surface area or circulation of water, water quality, fertility of marshes or fish or wildlife resources, or other conditions impacting the environment, as defined in Section 21060.5 of the Public Resources Code;

(e) That public health, safety, and welfare require that fill be constructed in accordance with sound safety standards which will afford reasonable protection to persons and property against the hazards of unstable geologic or soil conditions or of flood or storm waters;
(f) That fill should be authorized when the filling would, to the maximum extent feasible, establish a permanent shoreline;
(g) That fill should be authorized when the applicant has such valid title to the properties in question that he or she may fill them in the manner and for the uses to be approved.

Overview of the Proposed Fill

Box 3 of the BCDC consistency determination application requests certain information be provided, including the (a) jurisdiction areas where fill would be located; (b) surface area of tidal and subtidal fill; (c) total volume of solid fill in tidal and subtidal areas; (d) type of fill (i.e., solid, floating, pile-supported, and cantilevered); (e) total area of fill in jurisdictional areas; (d) area of fill to be reserved for public access and non-public access; and (g) information regarding the fill. A summary of the requested fill information is provided in Table 7. Additional details regarding the fill are found in Section 3.15.1.

Table 7: Types of Areas to be Filled, Type of Fill, Volume of Fill, and Area of Fill

Areas where Fill will be Placed	Purpose of Fill	Volume of Fill (cubic yards)	Area of Fill (square feet)	Area of Fill (acre)
Certain waterway/San Francisco Bay	Flood risk management levees and tide gate across Artesian Slough	9,700	30,492	0.7
Salt ponds	Flood risk management levee and ecotone fill	637,000	2,439,360	56
Managed wetlands	None	293,300	203,564	5.3
	Total Jurisdictional Fill	***940,000***	***2,673,416***	***62***
Non-jurisdictional fill	Flood risk management levees (and associated maintenance roads) and upland portions of the ecotone fill	1,511,394	3,857,000	88
	Total Fill	***2,409,429***	***6,530,416***	***150***

BCDC can only approve fill within its jurisdiction for five purposes, including: accommodating water-oriented uses; minor fill for improving shoreline appearance; minor fill for providing new public access to the Bay; accommodating a project that is necessary to the health, safety, and welfare of the public in the entire Bay Area; and accommodating certain activities in Suisun Marsh.

The fill is proposed for three purposes. The primary purposes are to construct a flood risk management levee to protect the community of Alviso and the Wastewater Facility, which is considered accommodating a project that is necessary to the health, safety, and welfare of the public and facilitating tidal marsh restoration, which is considered accommodating water-oriented uses. A secondary purpose of the fill is to enhance the levee resistance to sea level rise, which is considered accommodating a project that is necessary to the health, safety, and welfare of the public. An ancillary purpose of the fill is to provide recreation opportunities, which is considered providing public access.

All fill proposed would consist of *solid earthen fill* to construct the earthen levees and ecotones. The area of fill that will be reserved for public access is the area on the tops of the levee and associate visitor seating and viewing areas. A majority of the fill will be used for ecosystem restoration. This area would be off limits to public access; however, the public will be able to recreate and enjoy the non-access area, as it will provide protected scenic and wildlife viewings. In addition, the project trails and pedestrian bridges will tie into the existing Bay Trail and other recreation trails already existing in and around the project area. Other than installing various public access features (e.g., benches and viewing platforms), no supporting structures will be built on the fill.

4.1.1 Consistency with McAteer-Petris Bay Fill Policies

This section discusses how the project is consistent to the maximum extent practicable with the *fill in salt ponds* enforceable policies.

Section 66605(c) of the McAteer-Petris Act: *That the water area authorized to be filled should be the minimum necessary to achieve the purpose of the fill.*

The area proposed for filling conservatively includes 145 acres of BCDC jurisdiction, including 20 acres of San Francisco Bay, 111 acres of salt ponds, and 14 acres of managed wetlands. During pre-construction, engineering, and design of the project, the USACE may find opportunities to reduce the amount of fill while meeting the overall objective of the project.

As discussed, the purpose of the fill is to:

- Accommodate the health, safety, and welfare of the public in the Bay Area by providing additional protection to the Alviso community from tidal flooding and the South Bay Shoreline and adjacent areas from sea level rise;
- Accommodate water-oriented uses by restoring tidal marsh habitat; and
- Providing new public access to the refuge and Bay (a secondary purpose)

In addition, the project facilities expansion and protection of the Don Edwards Wildlife Refuge; wildlife refuges are the priority use of most of the South Bay, including the project area.

The fill used for flood risk management levee and a portion of the ecotone would placed outside of BCDC jurisdiction. The approximate 1,300 cubic yards of fill required to construct a tide gate across Artesian Slough would be placed in BCDC jurisdiction. Approximately 940,000 cubic yards of fill used for ecotone construction is necessary to provide a transition zone between the restored marsh habitat and the flood risk management levee. As outboard levees are breeched, the ecotone would facilitate marsh restoration in other ponds located in the project area. Further, the ecotone could provide space for marshes to retreat inland as sea levels rise and may protect the flood risk management levee wave erosion, as it would provide wave attenuation.

Because the fill is consistent with the approved purposes for filling the Bay, the fill is consistent with the priority uses of the project area, and the fill is considered the minimum necessary to achieve the purpose of the fill, the proposed project is ***fully consistent with this section of the McAteer-Petris Act.***

Section 66605(d) of the McAteer-Petris Act: *That the nature, location, and extent of any fill should be such that it will minimize harmful effects to the bay area, such as, the reduction or impairment of the volume surface area or circulation of water, water quality, fertility of marshes or fish or wildlife resources, or other conditions impacting the environment, as defined in Section 21060.5 of the Public Resources Code.*

In its February 2015 letter, BCDC specifically asked that details be provided regarding how harmful effects to the natural environment will be minimized and how the fill could be affected by scour and erosion, influencing the overall durability of the slope and its ability to provide benefits over time.

The levee side slopes would be moderately vegetated and will be appreciably resistant to erosion during high water (i.e., tidal) events. Transitional habitat fills would provide additional protection against erosion during both normal and high water events. It is anticipated that erosion and scour damage will be limited and small enough to either repair itself or require minimal maintenance or adaptive management, given the soil types that will be used for fill.

The nature, location, and extent of the fill are not expected to result in harmful effects to the Bay. The fill would be located in areas that are predominately cut off from tidal action. Once the flood risk management levee and ecotone are constructed, restoration activities in the salt ponds will occur, outboard levees will be breached, and the salt ponds will be exposed to tidal action. Over time, sediment will settle into the ponds and slowly raise elevations such that tidal marsh can establish. Ultimately, the project will create approximately 2,900 acres of tidal marsh habitat in the South Bay that will increase the circulation of water through the areas currently cut off by tidal circulation, improve water quality, and provide additional marsh and transitional habitat for fish and wildlife. *Overall, tidal marsh creation is expected to have long-term beneficial effects on water circulation, water quality, and fish and wildlife.*

Additionally, the project would provide increased tidal flood protection in the adjacent developed areas and protect against sea level rise. Flooding is known to result in adverse environmental effects on aquatic ecosystems, as it can introduce constituents of concern and other foreign objects into the system.

As described in *Section 4.5 of the Environmental Impact Statement/Environmental Impact Report (EIS/EIR)*, short-term construction activities associated with building the flood risk management levee, building transitional habitats, and restoring tidal action to the former salt ponds could occur. A majority of the construction impacts include the potential temporarily increase suspended sediment concentrations and turbidity, suspending pollutants (such as fuels and oils associated with heavy equipment) in water bodies in and adjacent to the project area, increasing temperature, decreasing dissolved oxygen, increasing salinity levels when the salt pond berms are breached, and exposing the water column and soils to elevated levels of constituents of concern. These impacts could result in temporary exceedance of some water quality standards or objectives. Additionally, Pond A12 has historically been identified as having sediments with total mercury levels which exceed Basin Plan objectives. Disturbance to sediments on the edge of Pond A12 could mobilize and transport this contaminant. Implementation of avoidance and minimization measures identified below would limit water quality effects. Further, imported clean fill used to construct the levee would permanently cover some mercury-laden sediment.

The proposed levee would block a freshwater input from Artesian Slough to a freshwater marsh area near the Don Edwards Environmental Education Center. To compensate for the loss of freshwater inflow to the marsh, a small breach of an existing berm along the west side of Artesian Slough to allow gravity flow of freshwater from the slough to the marsh. The breach would be sized to provide the same amount of input that occurs under the baseline condition. Water quality of this part of Artesian Slough could be temporarily affected at the time of the breach, but, given the size of the breach, the water quality effects are not expected to be significant. Because the freshwater transfer breach would be much smaller and would not involve any other construction, its potential water quality effects are also expected to be less than significant.

Ecosystem restoration involves many activities that would disturb upland areas, salt ponds, and points along Alviso Slough and Coyote Slough. The lowering of outboard levees, excavation of pilot channels, and breaching of outboard levees would be the primary earthwork components of restoration activities that would have the potential to affect water quality. Construction of starter channels, construction of side-cast berms, lowering of internal berms, and breaching of internal berms would take place prior to breaching outboard berms such that the ponds are still hydraulically isolated from the Bay. By completing all in-pond restoration activities, construction would not affect the water quality of the Bay.

The proposed project provides several avoidance, minimization, and mitigation measures to ensure that impacts to water quality are minimized; these measures are detailed in Section 4.5 of the EIS/EIR. Additionally, construction activities would be subject to water quality protection avoidance and minimization measures adopted as part of this project, best management practices outlined in a Storm Water Prevention Protection Plan (SWPPP) for each construction phase, and the Waster Quality Certification/Waste Discharge Requirement (WQC/WDR). WQC/WDR Order No. R2-2008-0078 applies to the SBSPRP and could be amended to include the Shoreline Phase I Project work area. Should the Shoreline Phase I Project requires a new WQC/WDR, the requirements would probably be similar to those included in the SBSPRP WQC/WDR. Any new WQC/WDR would be obtained during the pre-construction, engineering, and design phase.
As discussed, the nature, location, and extent of the fill are not expected to be adversely affected by the project. The project would be designed to minimize scour and be maintained such that any scour is repaired. While construction-related water quality impacts are expected, avoidance, minimization measures, and adherence to requires of a WQC/WDR and SWPPP obtained for this project will reduce impacts to water quality. Further, creation of tidal marsh habitat is expected to have long-term beneficial effects on water circulation, water quality, and fish and wildlife. Based on this analysis and the detailed water quality analysis provided in the 2015 EIS/EIR, the proposed project is ***fully consistent with this section of the McAteer-Petris Act.***

Section 66605(e) of the McAteer-Petris Act: *That public health, safety, and welfare require that fill be constructed in accordance with sound safety standards which will afford reasonable protection to persons and property against the hazards of unstable geologic or soil conditions or of flood or storm waters.*

The USACE has conducted detailed geotechnical investigation to determine the types of soils present in the area and ensure that imported fill material will be consistent with the soils required to construct flood risk management levees. During pre-construction, engineering, and design, the results of the geotechnical investigations will be confirmed and additional investigations conducted, as necessary. Further, the engineered levees will be constructed in accordance with USACE's flood risk management levee standards. Ensuring that the levees are constructed in accordance with these, it is reasonable to assume that persons and property will be protected against hazards of unstable geologic or soil conditions or of flood or storm water conditions.

During the pre-construction, engineering, and design phase, the USACE will ensure that all geotechnical data is accurate and design the project to comply with all required engineering standards to ensure the project functions as planned and people and property are safe. As such, the project is ***fully consistent with this section of the McAteer-Petris Act.***

Section 66605(f) of the McAteer-Petris Act: *That fill should be authorized when the filling would, to the maximum extent feasible, establish a permanent shoreline*

The project proposes to construct an approximately 20,000 linear foot flood risk management levee with approximately 97 acres of transitional habitat and 2,900 acres of marsh habitat bayward of the levee. For at least the 50-year life of the project, the levee is expected to be a permanent structure that protects against tidal flooding and sea level rise. As such, the fill should be authorized as being ***fully consistent with this section of the McAteer-Petris Act.***

Section 66605(g) of the McAteer-Petris Act: *That fill should be authorized when the applicant has such valid title to the properties in question that he or she may fill them in the manner and for the uses to be approved.*

As discussed, the USFWS owns a majority of the project lands and the City of San José owns Pond A18. The non-federal sponsors are currently working with the City of San José to lay out future ownership and operations and maintenance responsibilities for Pond A18. By the end of 2015, the non-federal sponsors will have entered into a memorandum of understanding with the City outlining the process for transferring A18 and the adjacent areas where the flood risk management levee would be constructed to the non-federal sponsor. It is likely that the SCVWD will acquire a fee-title to Pond A18 and the levee area, as well as the levee-top trail. The SCVWD will likely enter into a joint-use agreement with the City of San José for train management and operation. All USFWS will remain in USFWS ownership.

There are some small areas of the project where very small parcels are held by private individuals or state agencies (such as State Lands Commission). Until the project is more advanced in design, the exact determination of lands that will need to be acquired will not be known. These small parcels of lands would not significantly affect the project. Before construction commences, the non-federal sponsor is required to furnish all lands, easements, right-of-ways, and disposal (LERRDs) to the USACE. However, to ensure that the project is fully consistent with this Commission law, detailed land ownership information will be provided to BCDC as part of the consistency determination.

Until all land ownership information is acquired and LERRDs are furnished, the project is ***not fully consistent with Section 66605(g) of the McAteer-Petris Act.*** However, this information will be provided to BCDC along with a revision of this consistency determination when all LERDDs are furnished, thus making the project *fully consistent.*

4.2 Bay Plan Salt Pond Policies

The Bay Plan has five policies related to salt ponds; of these, only policy 3 is applicable to the project. Policy 3 of the Bay Plan encourages the restoration, enhancement, and conversion of formal salt ponds to subtidal and wetland habitats, and require that projects include clear and specific long-term and short-term biological and physical goals, success criteria, a monitoring program, and provisions for long-term maintenance. Specifically, policy 3 states:

"Any project for the restoration, enhancement or conversion of salt ponds to subtidal or wetland habitat should include clear and specific long-term and short-term biological and physical goals, success criteria, a monitoring program, and provisions for long-term maintenance and management needs. Design and evaluation of the project should include an analysis of:

a. The anticipated habitat type that would result from pond conversion or restoration, and the predicted effects on the diversity, abundance and distribution of fish, other aquatic organisms and wildlife;
b. Potential fill activities, including the use of fill material such as sediments dredged from the Bay and rock, to assist restoration objectives;
c. Flood management measures;
d. Mosquito abatement measures;
e. Measures to control non-native species;
f. The protection of the services provided by existing public facilities and utilities such as power lines and rail lines;
g. Siting, design and management of public access to maximize public access and recreational opportunities while avoiding significant adverse effects on wildlife; and
h. Water quality protection measures that include management of highly saline discharges into the Bay; monitoring and management of mercury methylation and sediments with contaminants; managing the release of copper and nickel to the Bay; and the minimization of sustained low dissolved oxygen levels in managed ponds.

4.2.1 Consistency with Bay Plan Salt Pond Policies

The project proposes to restore approximately 116 acres of transitional habitat included in the 2,900 acres of tidal marsh habitat consistent with the overall goals and policies of the Bay Plan. The USACE has prepared a MAMP (Exhibit D in the application, Appendix F in this Integrated Document) which identifies specific short- and long-term biological and physical goals, success criteria, a monitoring program, and provisions for long-term maintenance. The design analysis also includes: (a) the anticipated habitat types that would result from pond conversion or restoration, and the predicted effects on the diversity, abundance and distribution of fish, other aquatic organisms and wildlife; (b) potential fill activities; (c) flood management measures; (e) measures to control non-native species; (f) protection of the services provided by existing public facilities and utilities; (g) maximized public access and recreational opportunities; and (h) water quality protection measures, including salinity discharge mitigation, salinity discharge monitoring; and monitoring and measurement of methylmercury production. The MAMP currently does not include measures for mosquito abatement; however, it will be updated to include plans and measures for mosquito abatement, as necessary.

Detailed information regarding the habitat type that will be restored and is anticipated to develop is provided in Figure 6 and Table 1, and also provided is provided in Section 4.6.2.3.2 of the EIS/EIR (July 2015). The effects of the project on habitat are provided in Table 7 and discussed in Section 4.7.2.4.2.2 of the EIS/EIR.

The project will follow the SBSPRP's adaptive management program and rely on this already-established process to guide the selection of the final mix of habitats. The Shoreline Phase I study MAMP and EIS/EIR was written more narrowly, per USACE requirements, to describe activities that can be cost shared by the USACE, namely those that fall within the project footprint and will determine whether the project has met its ecosystem restoration objectives. Other monitoring and adaptive management activities will be implemented by the SBSPRP's adaptive management program, such as those that occur outside of the project footprint or are associated with meeting permit requirements, other project purposes (flood risk management and recreation), or methylmercury issues.

The MAMP includes monitoring and adaptive management of sediment dynamics, restored tidal marsh habitat vegetation (including non-native species adaptive management); habitat use by birds, fish, and salt marsh harvest mouse; and transitional zones (ecotones). Additionally, the MAMP provides monitoring targets and metrics associated with ecosystem restoration, as well as triggers for adaptive management. Finally, all monitoring data will be reported to the adaptive management team, which currently focuses on restoration activities in the project area.

During the pre-construction, engineering, and design phase, the engineering will be refined as the detailed designs are prepared. Additionally, the MAMP will be revised accordingly. The MAMP is considered a living document and, throughout the mitigation and adaptive management phase of the project, it will be updated, as necessary, to reflect changed conditions, suggestions from the adaptive management team, and any changed adaptive management measures.

Assessment of flood risk management measures post construction will be covered in the future operation and maintenance manual and adjustments to flood risk management features will be undertaken either by the non-federal sponsor as part of their operation, maintenance, repair, rehabilitation, or replacement responsibilities, as described in the future manual. If a major change is needed, the change would be require either a Section 408 permit from the USACE (to modify an existing federal project) or a post-authorization change process, which would be undertaken by the non-federal sponsor and USACE.

With the exception of mosquito abatement, all policy requirements are included in the current design and MAMP. The project design and MAMP will be updated to include mosquito abatement, as necessary. Further, the MAMP is a living document and will be updated, as necessary, when the project is further developed or as necessary. Revised versions of the project design and MMAP will be provided to BCDC upon request. Based on this analysis, the project is ***fully consistent with the Salt Pond policies of the Bay Plan.***

4.3 Bay Plan Climate Change Policies

The Bay Plan has eight policies related to climate change. Of these, policies 2, 3, and 8 are applicable to the proposed project. These policies are listed below.

Policy 2: When planning shoreline areas or designing larger shoreline projects, a risk assessment should be prepared by a qualified engineer and should be based on the estimated 100-year flood elevation that takes into account the best estimates of future sea level rise and current flood protection and planned flood protection that will be funded and constructed when needed to provide protection for the proposed project or shoreline area. A range of sea level rise projections for mid-century and end of century based on the best scientific data available should be used in the risk assessment. Inundation maps used for the risk assessment should be prepared under the direction of a qualified engineer. The risk assessment should identify all types of potential flooding, degrees of uncertainty, consequences of defense failure, and risks to existing habitat from proposed flood protection devices.

Policy 3: To protect public safety and ecosystem services, within areas that a risk assessment determines are vulnerable to future shoreline flooding that threatens public safety, all projects–– other than repairs of existing facilities, small projects that do not increase risks to public safety, interim projects and infill projects within existing urbanized areas—should be designed to be resilient to a mid-century sea level rise projection. If it is likely the project will remain in place longer than mid-century, an adaptive management plan should be developed to address the long-term impacts that will arise based on a risk assessment using the best available science-based projection for sea level rise at the end of the century.

Policy 8: To effectively address sea level rise and flooding, if more than one government agency has authority or jurisdiction over a particular issue or area, project reviews should be coordinated to resolve conflicting guidelines, standards or conditions.

4.3.1 Consistency with Bay Plan Climate Change Policies

In its February 2015 comment letter, BCDC discussed that the climate change policies require a risk assessment for larger projects (Policy 2), and that projects be designed to be resilient to mid-century sea level rise projection with an adaptive management plan to address impacts from sea level rise through the end of the century (Policy 3). The letter explains that the project analysis extends only to 2067 and that an analysis should be done to show sea level rise adaptability through the end of the century.

Policy 8 requires that "…if more than one government agency has authority or jurisdiction over a particular issue or area, project reviews should be coordinated to resolve conflicting guidelines, standards or conditions." Because BCDC has jurisdiction over this particular issue and USACE has mandatory sea level rise policy guidance (ER 1100-2-8162, December 31, 2013), coordination may be required to ensure that sea level rise is properly addressed.

The USACE's sea level rise policy (ER 1100-2-8162, December 31, 2013) provides the sea level rise analysis required for civil works projects, including the sea level rise curves which must be used to assess the low, intermediate, and high rates of sea level rise for the project. For the proposed project, both the 'low' and 'high' rates were used. The high rate exceeds the upper bounds of the

Intergovernmental Panel on Climate Change (IPCC) estimates from both 2001 and 2007 to accommodate rapid loss of ice from Antarctica and Greenland, but is within the range of values published in peer-reviewed articles.

Though initially justified over a 50-year economic period of analysis, USACE projects can remain in service much longer. The climate for which the project was designed can change over the full lifetime of a project to the extent that stability, maintenance, and operation may be impacted, possibly with serious consequences, but also potentially with beneficial consequences. Given these factors, the project planning horizon (not to be confused with the economic period of analysis) should be 100 years, consistent with ER 1110-2-8159 *Life Cycle Design and Performance* (USACE 1997)

The final EIS/EIR (July 2015) provides sea level rise analyses for 2017 through 2067 and 2017 through 2100. The three USACE ea level rise rates were analyzed using the policy requirements of ER 1100-2-8162. For the period from 2017 through 2067 (approximately mid-century), the low and high rates used were 6.12 and 31.08 inches. For the period from 2017 through 2100 (end of century), the low and high rates used were 31.08 and 60.6 inches. BCDC's sea level rise projections range from 10-17 inches at mid-century and 31-69 inches at the end of the century.

The results of the analysis indicate that for the low rate, the project would provide a level of risk reduction for the 1-percent bayside water level through the year 2100. The current FEMA certification requirement of 2 feet of freeboard would also be maintained. For the high rate (Figure 17, alternative 3), the project would provide risk reduction against the 1-percent bayside ACE water level through 2094; however, the 2-foot FEMA certification requirement would only be maintained through 2067.

As shown, the project is resilient to 2067 (mid-century). Based on consideration of actionable climate science, the earliest date that would trigger a comprehensive revision of flood risk in the area would be year 2067 if a significant acceleration of sea level rise occurred, resulting in the high sea level rise scenario. The project would have adaptive capacity to elevation 16.0 feet NAVD 88, which has been established as an adaptation threshold for the project. Considering this threshold, the 2-foot FEMA freeboard requirement could not be maintained past 2079 without a significant expansion of the project base to include actions to address fluvial and stormwater interior drainage in the project area.

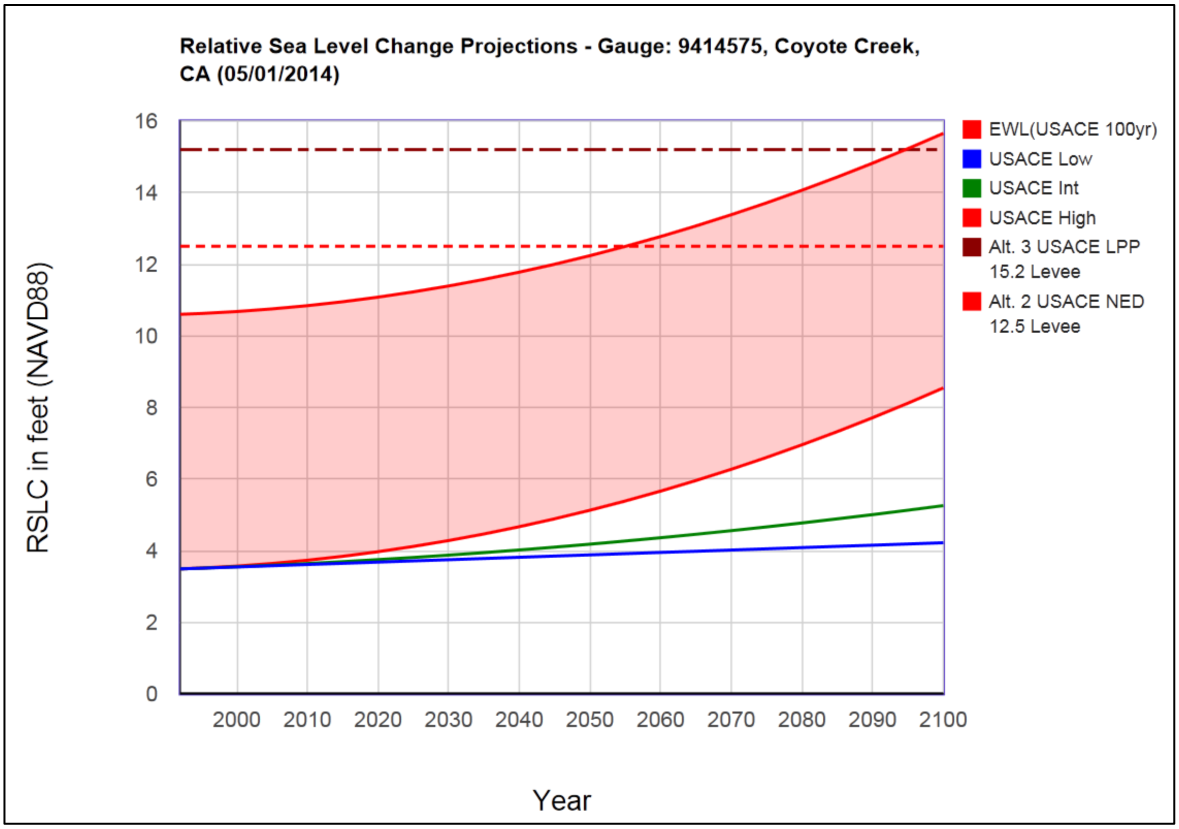


Figure 17: High Relative Sea Level Rise Scenario 1% ACE Water Level Projection to 2100

The project's sea level rise analysis was appropriately conducted through the end of the century. Rather than using BCDC's sea level rise predictions, the USACE used the curves required by ER 1100-2-8162. Should the high sea level rise rate occur in the future, the existing plan would protect against sea level rise through 2067 and the USACE has measures to increase levee heights to protect sea level rise until 2079. Beyond this time, additional plans would need to be made. Based on USACE's requirement to follow ER 110-2-8162, the project is ***consistent to the maximum extent practicable with Policies 2 and 3 of the Bay Plan's climate change policies.*** However, per climate change Policy 8, USACE and BCDC should determine how to best represent sea level rise risk to the project and any appropriate mitigation such that USACE can be *fully consistent* with this policy, if necessary.

4.4 Bay Plan Shoreline Protection Policies

The Bay Plan includes five shoreline protection policies. Of these, Policies 1, 3, 4, and 5 are applicable to the project. The applicable policies are discussed below.

Policy 1. New shoreline protection projects and the maintenance or reconstruction of existing projects and uses should be authorized if: (a) the project is necessary to provide flood or erosion protection for (i) existing development, use or infrastructure, or (ii) proposed development, use or infrastructure that is consistent with other Bay Plan policies; (b) the type of the protective structure is appropriate for the project site, the uses to be protected, and the erosion and flooding conditions at the site; (c) the project is properly engineered to provide erosion control and flood protection for the expected life of the project based on a 100-year flood event that takes future sea level rise into account; (d) the project is properly designed and constructed to prevent significant impediments to physical and visual public access; and (e) the protection is integrated with current or planned adjacent shoreline protection measures. Professionals knowledgeable of the Commission's concerns, such as civil engineers experienced in coastal processes, should participate in the design.

Policy 3. Authorized protective projects should be regularly maintained according to a long-term maintenance program to assure that the shoreline will be protected from tidal erosion and flooding and that the effects of the shoreline protection project on natural resources during the life of the project will be the minimum necessary.

Policy 4. Whenever feasible and appropriate, shoreline protection projects should include provisions for nonstructural methods such as marsh vegetation and integrate shoreline protection and Bay ecosystem enhancement, using adaptive management. Along shorelines that support marsh vegetation, or where marsh establishment has a reasonable chance of success, the Commission should require that the design of authorized protection projects include provisions for establishing marsh and transitional upland vegetation as part of the protective structure, wherever feasible.

Policy 5. Adverse impacts to natural resources and public access from new shoreline protection should be avoided. Where significant impacts cannot be avoided, mitigation or alternative public access should be provided.

4.4.1 Consistency with Bay Plan Shoreline Protection Policies

In its February 2015, draft EIS/EIR comment letter, BCDC commented that the bay plan shoreline protection polices also require that shoreline protection be properly engineered to provide erosion control and flood protection for the life of the project based on a 100-year flood event that takes into account sea level rise (Policy 1).

As discussed, one of the main purposes of the project is to provide flood risk management to the community of Alviso for a period of at least 50 years. The alternative selected, a flood risk management levee, was selected to protect against a 100-year flood. The initial engineering design of the levee was conducted using required USACE guidance, including appropriate geotechnical techniques and erosion control guidance. During pre-construction, engineering, and design, the engineering design will be refined such that all appropriate measures are included to prevent erosion and protect against flooding. Current erosion and scour control measures include appropriate vegetation on the levee side slopes (i.e., native grasses) and wave attenuation provided by the gently sloping ecotone.

The project also includes restoration of tidal marsh habitat, which will be included in the Don Edwards Refuge, as well as public access and recreation opportunities to enjoy the refuge. As currently designed, the project is integrated incorporate existing recreation opportunities and surrounding flood risk management projects.

Based on the extensive analysis that has already taken place to ensure the flood risk management levee protects against a 100-year flood, is protected against scour and other natural elements, and is tied into existing recreation and flood risk management projects, the project is ***fully consistent with Policy 1 of the Bay Plan's Shoreline Protection policies.*** Further, during the pre-construction, engineering, and design phase, the USACE will coordinate with BCDC.

As part of the project, a detailed operations and maintenance manual will be prepared for the flood risk management levee and restored Pond A18. The non-federal sponsor will be required to adhere to the manual and regularly maintain the flood risk management levee and Pond 18. The long-term maintenance program will assure that the shoreline is protected from tidal erosion and flooding and that the effects of the shoreline protection project on natural resources during the life of the project will be the minimum necessary. The regular maintenance of the flood risk management levee and Pond A18 will ensure that the project is ***fully consistent with Policy 3 of the Bay Plan's Shoreline Protection policies.***

As discussed previously, the purpose of project is to protect the community of Alviso from flood risk, restore marsh and transitional habitat, and provide for recreation opportunities. As shown, the project includes provisions for nonstructural methods such as marsh vegetation and integrate shoreline protection and Bay ecosystem enhancement, using adaptive management. As such, the project is ***fully consistent with Policy 3 of the Bay Plan's Shoreline Protection policies.***

The project proposes to restore tidal marsh habitat and provide public access to the restored habitat. During construction, the project will avoid, minimize, and mitigate for the potential temporary impacts to natural resources, as described in the final EIS/EIR (September 2015). Therefore, the project is ***fully consistent with Policy 5 of the Bay Plan's Shoreline Protection policies.***

4.5 Bay Plan Safety of Fills Policies

The Bay Plan provides four policies related to the safety of Bay fills. Of these, Policy 4 is applicable to the project. Policy 4 is described below.

Policy 4. Adequate measures should be provided to prevent damage from sea level rise and storm activity that may occur on fill or near the shoreline over the expected life of a project. The Commission may approve fill that is needed to provide flood protection for existing projects and uses. New projects on fill or near the shoreline should either be set back from the edge of the shore so that the project will not be subject to dynamic wave energy, be built so the bottom floor level of structures will be above a 100-year flood elevation that takes future sea level rise into account for the expected life of the project, be specifically designed to tolerate periodic flooding, or employ other effective means of addressing the impacts of future sea level rise and storm activity. Rights-of-way for levees or other structures protecting inland areas from tidal flooding should be sufficiently wide on the upland side to allow for future levee widening to support additional levee height so that no fill for levee widening is placed in the Bay.

4.5.1 Consistency with Bay Plan Safety of Fills Policies

In its February 2015, comment letter, BCDC expresses concern that the project's sea level rise analysis to 2067 may not account for the additional right-of-ways that may be required. As discussed in Section 4.3.1, the sea level rise analysis was conducted per USACE's guidance at ER 1100-2-8162, which requires sea level rise analysis for a period of 50 years. Regardless, USACE conducted an end-of-century analysis (through 2100) using the high sea level rise rate. The analysis showed that even with extremely high sea level rise, the project would be resistant through 2067. As designed, the project could likely obtain the right-of-ways to expend the flood risk management levee beyond 2067 to 2079; however, beyond this date, additional detailed analysis would likely be required and additional right-of-ways obtained. Even though the sea level rise analysis extended to 2010, the period of analysis and life of the project is expected to be 50 years, not 83.

The project is consistent with USACE planning policies of a 50-year life. However, should sea level rise occur at a high rate, the USACE would explore options to further protect the project and the community from tidal flooding long before sea level rise adversely affects the project. Monitoring sea level rise and taking action early would ensure that the project is ***fully consistent with Policy 4 of the Bay Plan's Safety of Fills policies.***

4.6 Bay Plan Tidal Marshes and Tidal Flats Policies

The Bay Plan includes eight policies designed to protect and enhance tidal marshes and tidal flats. Of these, Policies 3, 4, and 6 are applicable to the proposed project. These policies are listed below:

Policy 3. Projects should be sited and designed to avoid, or if avoidance is infeasible, minimize adverse impacts on any transition zone present between tidal and upland habitats. Where a transition zone does not exist and it is feasible and ecologically appropriate, shoreline projects should be designed to provide a transition zone between tidal and upland habitats.

Policy 4. Where feasible, former tidal marshes and tidal flats that have been diked from the Bay should be restored to tidal action in order to replace lost historic wetlands or should be managed to provide important Bay habitat functions, such as resting, foraging and breeding habitat for fish, other aquatic organisms and wildlife. As recommended in the Baylands Ecosystem Habitat Goals report, around 65,000 acres of areas diked from the Bay should be restored to tidal action to maintain a healthy Bay ecosystem on a regional scale. Regional ecosystem targets should be updated periodically to guide conservation, restoration, and management efforts that result in a

Bay ecosystem resilient to climate change and sea level rise. Further, local government land use and tax policies should not lead to the conversion of these restorable lands to uses that would preclude or deter potential restoration. The public should make every effort to acquire these lands for the purpose of habitat restoration and wetland migration.

Policy 6. Any ecosystem restoration project should include clear and specific long-term and short-term biological and physical goals, and success criteria, and a monitoring program to assess the sustainability of the project. Design and evaluation of the project should include an analysis of: (a) how the system's adaptive capacity can be enhanced so that it is resilient to sea level rise and climate change; (b) the impact of the project on the Bay's sediment budget; (c) localized sediment erosion and accretion; (d) the role of tidal flows; (e) potential invasive species introduction, spread, and their control; (f) rates of colonization by vegetation; (g) the expected use of the site by fish, other aquatic organisms and wildlife; (h) an appropriate buffer, where feasible, between shoreline development and habitats to protect wildlife and provide space for marsh migration as sea level rises; and (i) site characterization. If success criteria are not met, appropriate adaptive measures should be taken.

4.6.1 Consistency with Bay Plan Tidal Marsh and Tidal Flat Policies

The existing habitat provides very little transition zone between the levee alignment and salt ponds. The proposed project includes an ecotone fill that would create approximately 116 acres of transition zone between tidal and upland habitats. The transition zone is considered ecologically appropriate, shoreline projects should be designed to provide a transition zone and is consistent with the Ecosystem Habitat Goals Update and final USFWS Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California. The proposed transition zone is ***fully consistent with Policy 3 of the Bay Plan's tidal marsh and tidal flats policies.***

As required by Policy 4 of the tidal marsh and tidal flats policies, the project proposes to restore tidal marshes in the existing diked salt ponds. The restored tidal marsh will replace lost historic wetlands and will be managed to provide important Bay habitat functions, such as resting, foraging and breeding habitat for fish, other aquatic organisms and wildlife. The proposed restoration project is ***fully consistent with Policy 4 of the Bay Plan's tidal marsh and tidal flats policies.***

The ecosystem restoration project includes clear and specific long and short-term biological and physical goals and a monitoring program to ensure the goals are met. The design and evaluation project has analyzed sea level rise and showed that the project is resilient through the project's planning period for potential high rates of sea level rise and can be modified to ensure resilience through 2079 (beyond the scoped life of the project). For lower rates, the project is resilient through the end of the century.

The design of the project includes a detailed analysis on the Bay's sediment budget, including how sediment will be introduced to the ponds once the outboard levees are breached. The MAMP includes success criteria for sedimentation, as well as monitoring requirements and adaptive management. Vegetation is an important component of the restoration. The MAMP includes success criteria for native vegetation establishment and growth, as well as monitoring and adaptive management. The project proposes maintenance and monitoring to reduce the risk of invasive plant species establishing in the project area. The analysis also includes details regarding the fish, other aquatic organisms, and wildlife that are expected to use the restored areas, and also provides success criteria, monitoring, and adaptive management.

In addition, the project was developed using lessons learned from the SBSPRP and other similar restoration projects around the Bay Area. The project's feasibility level design and MAMP will be further developed and refined during pre-construction, engineering, and design, as well as during monitoring, as necessary. This will ensure that the proposed restoration project is ***fully consistent with Policy 6 of the Bay Plan's tidal marsh and tidal flats policies.***

4.7 Bay Plan Public Access Policies

The Bay Plan includes fourteen public access policies which support public access to the Bay. Of these, seven are applicable to the project. These are listed below.

Policy 1. A proposed fill project should increase public access to the Bay to the maximum extent feasible, in accordance with the policies for public access to the Bay.

Policy 3. Public access to some natural areas should be provided to permit study and enjoyment of these areas. However, some wildlife are sensitive to human intrusion. For this reason, projects in such areas should be carefully evaluated in consultation with appropriate agencies to determine the appropriate location and type of access to be provided.

Policy 4. Public access should be sited, designed and managed to prevent significant adverse effects on wildlife. To the extent necessary to understand the potential effects of public access on wildlife, information on the species and habitats of a proposed project site should be provided, and the likely human use of the access area analyzed. In determining the potential for significant adverse effects (such as impacts on endangered species, impacts on breeding and foraging areas, or fragmentation of wildlife corridors), site specific information provided by the project applicant, the best available scientific evidence, and expert advice should be used. In addition, the determination of significant adverse effects may also be considered within a regional context. Siting, design and management strategies should be employed to avoid or minimize adverse effects on wildlife, informed by the advisory principles in the Public Access Design Guidelines. If significant adverse effects cannot be avoided or reduced to a level below significance through siting, design and management strategies, then in lieu public access should be provided, consistent with the project and providing public access benefits equivalent to those that would have been achieved from on-site access. Where appropriate, effects of public access on wildlife should be monitored over time to determine whether revisions of management strategies are needed.

Policy 5. Public access should be sited, designed, managed and maintained to avoid significant adverse impacts from sea level rise and shoreline flooding.

Policy 11. Federal, state, regional, and local jurisdictions, special districts, and the Commission should cooperate to provide appropriately sited, designed and managed public access, especially to link the entire series of shoreline parks, regional trail systems (such as the San Francisco Bay Trail) and existing public access areas to the extent feasible without additional Bay filling and without significant adverse effects on Bay natural resources. State, regional, and local agencies that approve projects should assure that provisions for public access to and along the shoreline are included as conditions of approval and that the access is consistent with the Commission's requirements and guidelines.

Policy 12. The Public Access Design Guidelines should be used as a guide to siting and designing public access consistent with a proposed project. The Design Review Board should advise the Commission regarding the adequacy of the public access proposed.

Policy 13. Public access should be integrated early in the planning and design of Bay habitat restoration projects to maximize public access opportunities and to avoid significant adverse effects on wildlife.

4.7.1 Consistency with Bay Plan Public Access Policies

The proposed project is a multipurpose flood risk management, ecosystem restoration, and recreation project. Once constructed, the project would provide approximately 2,100 of tidal marsh habitat that will be included in the Don Edwards Wildlife Refuge, which is a priority use of the South Bay salt pond areas. Construction of the project, particularly breaching levees, would remove some existing trails from public access, particularly around the perimeter of the USFWS' salt ponds (i.e., around A12, A13, A14, A9, A10, and A11) (the existing perimeter trail is shown on Figure 13). However, the breaches are necessary to restore the salt ponds to tidal marsh habitat, consistent with the Bay Plan's salt pond and tidal marsh policies. The project would add additional trails on top of the flood risk management levees, and would tie these trails into the Bay Trail (Figure 14). However, overall the project would result in less trail access once the existing trails around the USFWS' ponds are removed.

Because a majority of the project site would be restored to tidal marsh habitat for fish and wildlife use, recreation use in the interior of the marsh is not likely compatible with the restored area. Eliminating interior trails is also necessary to establish a contiguous wetland and protect fish and wildlife which use the restored area. Although existing interior trails would be removed, the project would construct wildlife viewing platforms and interpretive centers such that recreationists could enjoy the newly constructed tidal marshes and wildlife. In addition, the newly constructed trail would tie directly into the Bay Trail, which would allow for continuous use of the project site with adjoining areas.

The flood risk management project would maximize tidal marsh restoration, which would become part of the Don Edwards Refuge and protect sensitive wildlife, while maximizing public access. BCDC staff is invited to review and provide input on public access plans during the preconstruction engineering and design phase. As such, the proposed project is ***fully consistent with Policies 1, 3, 4, 11, 12, and 13 of the Bay Plan's public access policies.***

Once complete most of the public access trails would be on top of and bayward of the flood risk management. This would put the public access trails at risk of flooding as sea level rises. However, this is an unavoidable impact because the trails should be sited such that the public can enjoy the tidal marsh wetlands. The project does include small trail segments which will connect the Bay Trail to the Guadalupe Trail (Figure 14); these areas would be protected from sea level rise. Therefore, the project is ***fully consistent with Policy 5 of the Bay Plan's public access policies.***

4.8 Fish, Other Aquatic Organisms, and Wildlife

The purpose of the policies to protect fish, other aquatic organisms, and wildlife are to protect the bay's aquatic ecosystem from further degradation and to conserve the aquatic organisms and wildlife, including species protected under the state Endangered Species Acts, which depend on the bay. The Bay Plan provides five enforceable policies to achieve these goals, of which three are applicable to the proposed project. These are discussed below.

Policy 1: To assure the benefits of fish, other aquatic organisms, and wildlife for future generations, to the greatest extent feasible, the Bay's tidal marshes, tidal flats, and subtidal habitat should be conserved, restored, and increased.

Policy 3: In reviewing or approving habitat restoration programs the Commission should be guided by the recommendations in the Baylands Ecosystem Habitat Goals report and should, where appropriate, provide for a diversity of habitats to enhance opportunities for a variety of associated native aquatic and terrestrial plant and animal species.

Policy 4: The Commission should:

a. Consult with the California Department of Fish and Game and the U.S. Fish and Wildlife Service or the National Marine Fisheries Service whenever a proposed project may adversely affect an endangered or threatened plant, fish, other aquatic organism or wildlife species;

b. Not authorize projects that would result in the "taking" of any plant, fish, other aquatic organism or wildlife species listed as endangered or threatened pursuant to the state or federal endangered species acts, or the federal Marine Mammal Protection Act, or species that are candidates for listing under the California Endangered Species Act, unless the project applicant has obtained the appropriate "take" authorization from the U.S. Fish and

Wildlife Service, National Marine Fisheries Service or the California Department of Fish and Game; and

c. Give appropriate consideration to the recommendations of the California Department of Fish and Game, the National Marine Fisheries Service or the United States Fish and Wildlife Service in order to avoid possible adverse effects of a proposed project on fish, other aquatic organisms and wildlife habitat.

This policy requires BCDC to coordinate with the California Department of Fish and Wildlife (CDFW), USFWS, and National Marine Fisheries Service (NMFS) regarding CZMA authorizations. The USACE and local sponsor has closely coordinated with the afore-mentioned agencies. The USFWS has issued a biological opinion for the USFWS on April 27, 2017, and the NMFS issued a not likely to adversely affect concurrence letter on May 19, 2015. Both consultations are provided as Exhibit E in the application, and are in Appendix B of the Final Integrated Document.

Although the federal consultations are complete, the CDFW has not issued a California Endangered Species Act incidental take permit. Prior to issuing an incidental take permit, the CEQA document must be certified. This will not occur until after final state and agency review of the final EIR and statement of overriding conditions. When the EIR is certified, the local sponsor will provide the CDFW a copy of the certified EIR, as well as the NMFS not likely to adversely affect letter and the USFWS biological opinion. With these documents, the local sponsor will request a conference. It is likely that the conference will result in the issuance of a state incidental take permit.

4.8.1 Consistency with the Bay Plan's Fish, Other Aquatic Organisms, and Wildlife Policies

The purpose of Policy 1 is to conserve, restore, and increase tidal marshes, tidal flats, and subtidal habitat to assure the benefits of aquatic organisms and wildlife for future generations. The purpose of Policy 3 is to restore and protect Bay habitat consistent with the goals of the Baylands Ecosystem Habitat Goals report. The proposed project accomplishes the goals of both of these policies. As discussed throughout this consistency determination, the project would restore tidal action to the existing salt ponds at the project site, returning them to tidal marsh habitat. The approximate 2,900 acres of restored tidal marsh wetland habitats and transitional habitat will benefit fish, wildlife, and water quality in the region. Therefore, the project is ***fully consistent with Policies 2 and 3 of the Bay Plan's fish, other aquatic organisms, and wildlife policies.***

4.9 Bay Plan Water Quality Policies

The purposes of the water quality policies are to protect and improve Bay waters. The Bay Plan provides seven enforceable policies to achieve these goals, of which three are applicable to the proposed project. These are discussed below.

Policy 1: Bay water pollution should be prevented to the greatest extent feasible. The Bay's tidal marshes, tidal flats, and water surface area and volume should be conserved and, whenever possible, restored and increased to protect and improve water quality. Fresh water inflow into the Bay should be maintained at a level adequate to protect Bay resources and beneficial uses.

Policy 2: Water quality in all parts of the Bay should be maintained at a level that will support and promote the beneficial uses of the Bay as identified in the San Francisco Bay Regional Water Quality Control Board's Water Quality Control Plan, San Francisco Bay Basin and should be protected from all harmful or potentially harmful pollutants. The policies, recommendations, decisions, advice and authority of the State Water Resources Control Board and the Regional Board, should be the basis for carrying out the Commission's water quality responsibilities.

Policy 3: New projects should be sited, designed, constructed and maintained to prevent or, if prevention is infeasible, to minimize the discharge of pollutants into the Bay by: (a) controlling pollutant sources at the project site; (b) using construction materials that contain nonpolluting materials; and (c) applying appropriate, accepted and effective best management practices, especially where water dispersion is poor and near shellfish beds and other significant biotic resources.

4.9.1 Consistency with the Bay Plan's Water Quality Policies

The purpose of the project directly achieves the goals of Policy 1, as the project would restore approximately 2,900 acres of tidal marsh wetland and transitional habitat. Additionally, the project would not impair freshwater flow into the Bay. The project is ***fully consistent with Policy 1 of the Bay Plan's Water quality Policy.***

Once constructed, the project would improve water circulation in the South Bay Salt Ponds and improve water quality through the project site and surrounding areas. During construction, excess sediment, water with high concentrations of salt, and other constituents may be released into the Bay. The chance of such introductions would be minimized by completing all in-pond construction prior to breaching the outboard levees. Although a WQC is not yet issued for the project, the USACE has coordinated with the Regional Water Quality Control Board during the SBSPRP and during the development of this project. The current analysis assumes that much of the water quality requirements for the SBSPRP will be included as requirements for this project. As such, the current project was designed to include the requirements of the SBSPRP WQC requirements, best management practices, avoidance, and minimization measures. As is, the design is expected to minimize impacts to water quality. Based on this analysis, the project is ***fully consistent with Policy 2 of the Bay Plan's Water Quality Policies.***

Following certification of the CEQA document and during the preconstruction engineering and design phase, the USACE will work closely with the Regional Water Quality Control Board to develop additional measures to ensure water quality is protected. These measures will be included in any WQC issued for the project. Additionally, the project will comply with all requirements of any WQC issued for the project. Once a WQC is received, both the tentative and final orders will be provided to BCDC. Until such time as a final WQC is issued, the project is ***consistent to the***

maximum extent practicable with Policy 3 of the Bay Plan. Once a WQC is issued and submitted to BCDC, the project will be ***fully consistent with this policy.***

5.0 Box 7 – Information on Government Approvals

Table 8: Box 7 - Information on Government Approvals

Government	Required?	Type of Approval	Date of Approval Expected / Received	Agency Contact	
				Name	Phone Number
Local Government Discretionary Approval(s)	Yes	CEQA Certification			
City of San José	Yes	Right-of-Way			
State Lands Commission	??	??			
Regional Water Quality Control Board	Yes	WQC / WDR			
California Department of Toxic Substances Control	No	--	--	--	--
CDFW Streambed Alteration Agreement	No	--	--	--	--
CDFW Incidental Take Permit	Yes	ITP			
U.S. Army Corps of Engineers	No	404(b)(1) analysis required		Bill DeJager	414. 503.6866
USFWS Take Authorization	Yes	Incidental Take Statement	April 27, 2017	Kim Squires	916.930.5670
USFWS Biological Opinion	Yes	Biological Opinion	April 27, 2017	Kim Squires	916.930.5670
NMFS Take Authorization	No	Not likely to adversely affect letter	May 19, 2015	Amanda Squires	707.575.6083
NMFS Biological Opinion	No	Not likely to adversely affect letter	May 19, 2015	Kim Squires	707.575.6083
U.S. Coast Guard	No	--	--	--	--
Federal funding	Yes	Construction	--	Caleb Conn	414. 503.6849

		funding			

6.0 Box 8 – Environmental Documentation

The following provides the information required of Box 8 of the BCDC consistency determination application.

- The project is not categorically exempt from CEQA or NEPA and an EIR/EIS was prepared and circulated between December 2014 and April 2015.
- A negative determination was not prepared for this project.

7.0 Box 9 – Public Notice Information

Public notice information is required for all owners and residents within 100 feet of the project site. Appendix A9 includes a mailing list of the draft Integrated Document.

8.0 Conclusion

The project is currently consistent to the maximum extent practicable with the enforceable policies of the Bay Plan. The items which still require consistency are listed below.

1) ***Consistent with Section 66605(g) of the McAteer-Petris Act—Bay Fill***: That fill should be authorized when the applicant has such valid title to the properties in question that he or she may fill them in the manner and for the uses to be approved.

   Until all land ownership information is acquired and LERRDs are furnished, the project is ***not fully consistent with Section 66605(g) of the McAteer-Petris Act.*** However, this information will be provided to BCDC along with a revision of this consistency determination when all LERDDs are furnished, thus making the project *fully consistent.*

2) ***Consistent with Policies 2 and 3 of the Bay Plan's climate change polices:*** BCDC's climate change polices larger projects to assess a high rate scenario through the end of the century and large projects be designed such that they are resilient to mid-century sea level rise with adaptive management plans for end of century resiliency.

   As discussed, the project's sea level rise analysis was appropriately conducted through the end of the century. Should the high sea level rise rate occur in the future, the existing plan would protect against sea level rise through 2067 and the USACE has measures to increase levee heights to protect sea level rise until 2079. Beyond this time, additional plans would need to be made. Based on USACE's requirement to follow ER 110-2-8162, the project is ***consistent to the maximum extent practicable with Policies 2 and 3 of the Bay Plan's climate change policies.*** However, per climate change Policy 8, USACE and BCDC should determine how to best represent sea level rise risk to the project and any appropriate mitigation such that USACE can be *fully consistent* with this policy, if necessary.

3) ***Certification of the CEQA Document:*** BCDC will not issue a consistency notification until after the state decision-making authority certifies the CEQA documentation.

   The SCVWD and State Coastal Conservancy are the decision-making bodies under CEQA. Certification of the CEQA document will occur after final state and agency review of the EIR, as required by CEQA. Once review is complete, the local sponsors will certify the CEQA document. Once certified, the certified final CEQA document will be provided to BCDC.

4) ***Submission of a Water Quality Certification:*** Obtaining a water quality certification typically does not occur until pre-construction engineering and design. Additionally, the local decision authority must certify the CEQA document prior to issuance of a WQC.

   Following certification of the CEQA document and signing of the record of decision, the project will move into preconstruction engineering and design. During this time, additional engineering details will be developed and a WQC will be obtained. The USACE will work closely with the Regional Water Quality Control Board to ensure that the project does not violate state water quality standards and, if there is a potential for violations, they are mitigated and monitored. The WQC will also include a water quality monitoring plan to ensure the project complies with the requirements of the certification. Once a WQC is prepared, it will be provided to BCDC (both the tentative and the final WQC).

5) ***California Endangered Species Act:*** Though not required by CZMA, Bay Plan policies require state and federal take authorization be obtained prior to issuing a consistency notification. However, the California Department of Fish and Wildlife (CDFW) cannot issue a state incidental take permit until after the local decision authority must certify the CEQA document prior to issuance of a WQC.

   As discussed, the USACE has received a biological assessment from the USFWS and a letter from the National Marine Fisheries Service indicating its support of the project. Following certification of the CEQA document, the local sponsor intends to submit these documents to the CDFW for a conference and incidental take permit. Once complete, the take statement will be provided to BCDC. A copy of the USFWS biological opinion and NMFS letter are included as Exhibit E of this consistency determination.

Appendix A9

Mailing List

Final Integrated Document: Interim Feasibility Study with Environmental Impact Statement / Environmental Impact Report,
South San Francisco Bay Shoreline Phase I Study, Santa Clara County, California

State and Agency Review Mailing List

United States Senate:

The Honorable James M. Inhofe, Chairman
Majority Office, U.S. Senate Committee on Environment and Public Works

The Honorable Barbara Boxer, Ranking Member
Minority Office, U.S. Senate Committee on Environment and Public Works

The Honorable Lisa A. Murkowski, Chairman
U.S. Senate Committee on Energy and Natural Resources

The Honorable Maria E. Cantwell, Ranking Member
U.S. Senate Committee on Energy and Natural Resources

The Honorable Barbara Boxer
United States Senate

The Honorable Dianne Feinstein
United States Senate

United States Congress:

The Honorable William F. Shuster, Chairman
Committee on Transportation and Infrastructure
United States House of Representatives

The Honorable Peter A. DeFazio, Ranking Member
Committee on Transportation and Infrastructure
United States House of Representatives

The Honorable Robert W. Bishop, Chairman
Committee on Natural Resources
United States House of Representatives

The Honorable Raúl M. Grijalva, Ranking Member
Committee on Natural Resources
United States House of Representatives

The Honorable Michael Honda
United States House of Representatives

Tribal Governments:

The Ohlone Indian Tribe
Mr. Andrew Galvan

Ohlone Indian Tribe
Ms. Jakki Kehl

Ohlone/Costanoan Indian Tribe
Ms. Katherine Erolinda Perez

Ohlone/Costanoan Indian Tribe
Trina Marine Ruano Family
Representative Ramona Garibay

Amah Mutsun Tribal Band of Mission San Juan Bautista
Chairperson Irene Zwierlein

Amah Mutsun Tribal Band of Mission San Juan Bautista
Ms. Michelle Zimmer

Indian Canyon Mutsun Band of Costanoan
Ms. Ann Marie Sayers

Mr. Valentin Lopez
Chairman, Amah Mutsun Tribal Band

Muwekma Ohlone Indian Tribe
of the San Francisco Bay Area
Ms. Rosemary Cambra, Chairperson

Office of the Assistant Secretary of the Army for Civil Works - ASA(CW):

Mr. Douglas W. Lamont
Deputy Assistant Secretary of the Army (Project Planning and Review)
Office of the ASA(CW)

Mr. Let Mon Lee
Deputy Assistant Secretary of the Army (Policy and Legislation)
Office of the ASA(CW)

Non-Federal Sponsors:

Ms. Norma Camacho, Chief Operating Officer
Office of Watersheds, Santa Clara Valley Water District

Ms. Rechelle Blank, Engineering Unit Mgr
Watersheds Design & Construction Division, Santa Clara Valley Water District

Mr. Sam Schuchat, Executive Officer
State of California Coastal Conservancy

Ms. Amy Hutzel, San Francisco Bay Area Program Manager
State of California Coastal Conservancy

United States Department of the Interior:

Dr. Willie R. Taylor, Director of the Office of Environmental Policy and Compliance
Department of the Interior

Ms. Patricia S. Port, Regional Environmental Officer
Office of Environmental Policy and Compliance, Pacific Southwest Region

Mr. Marv Keller, Chief, Division of Environmental and Cultural Resources Management
Bureau of Indian Affairs

United States Department of the Interior – United States Fish and Wildlife Service (USFWS):

Mr. Joseph Terry, Senior Biologist
Sacramento Office, U.S. Fish and Wildlife Service

Mr. Ryan Olah, Coast/Bay Division Chief
Sacramento Office, U.S. Fish and Wildlife Service

Ms. Jennifer Norris, Field Supervisor
Sacramento U.S. Fish and Wildlife Office Programs

Mr. Armin Halston, Biologist
San Francisco Bay-Delta Office, U.S. Fish and Wildlife Service

Ms. Kim Squires, Section 7 Coordinator
San Francisco Bay-Delta Office, U.S. Fish and Wildlife Service

Ms. Kim Webb, Project Leader
Lodi Office, U.S. Fish and Wildlife Service

Ms. Anne Morkill, Project Leader, San Francisco Bay National Wildlife Refuge Complex
U.S. Fish and Wildlife Service, pacific Southwest Region

Mr. Larry Bright, Acting Federal NEPA Contact
Chief- Branch of Conservation Planning Assistance
U.S. Fish and Wildlife Service

United States Environmental Protection Agency:

Office of Federal Activities, EIS Filing Section,
Ariel Rios Building (South Oval Lobby),

Mr. James M. Munson, Environmental Protection Specialist
Enforcement Division, NEPA Section, USEPA, Region IX

Ms. Kathleen Martyn Goforth, Manager, Environmental Review Section

United States Department of Agriculture:

Mr. Andrée DuVarney, National Environmental Coordinator
USDA, Natural Resources Conservation Service

Mr. Carlos Suarez, State Conservationist
Richard E. Lyng USDA Service Center

Ms. Reina Rogers, American Indian Liaison
Richard E. Lyng USDA Service Center

United States Department of Homeland Security - United States Coast Guard:

Mr. Ed Wandelt, Chief, Office of Environmental Management
U.S. Coast Guard Headquarters

U.S. Coast Guard Environmental Management Division (G-SEC-3)

Mr. D.H. Sulouff, Chief, Bridge Section

United States Department of Homeland Security – Federal Emergency Management Agency (FEMA):

Mr. David Reese
Federal Preservation Officer
Environmental Planning Program Manager
Occupational Safety and Environmental Programs
Department of Homeland Security

Ms. Kristin Leahy
Environmental Officer, EHP
Office of Environmental Planning and Historic Preservation
FEMA/DHS

Mr. Casey De Shong, Congressional and Intergovernmental Affairs
Federal Emergency Management Agency, Region IX

U.S. Department of Commerce - National Oceanic and Atmospheric Administration (NOAA):

Mr. Steve Kokkinakis, NOAA NEPA Coordination
Office of Program Planning and Integration

Mr. Steve Leathery, National NEPA Coordinator
National Marine Fisheries Service

Ms. Shelby Mendez
Southwest Regional NMFS NEPA Coordinator

Mr. William W. Stelle, Jr.
National Marine Fisheries Service, West Coast Region

Mr. Jeff Mclain, Division Manager
National Marine Fisheries Service

U.S. Department of Transportation, Office of the Assistance Secretary for Transportation Policy:

Ms. Camille Mittelholtz, Environmental Policies Team Leader
Office of the Assistance Secretary for Transportation Policy, DOT

U.S. Department of Transportation - Federal Aviation Administration (FAA):

Mr. Maverick Douglas, Acting Manager
San Francisco Airports District Office, Federal Aviation Administration

Ms. Rhonda Solomon, Environmental Protection Specialist (NEPA)
Federal Aviation Administration, Office of Environment and Energy

Mr. John Weller, Wildlife Biologist
Federal Aviation Administration
Airport Safety and Operations Division (AAS-300)

Council on Environmental Quality:

Mr. Horst Greczmiel, Associate Director for NEPA Oversight
Council on Environmental Quality

Advisory Council on Historic Preservation:

Ms. Charlene D. Vaughn, Assistant Director for Federal Program Development
Advisory Council on Historic Preservation, office of Federal Programs

U.S. Department of Housing and Urban Development:

Ms. Danielle Schopp, Director- Office of Environment and Energy
U.S. Department of Housing and Urban Development

Mr. Ernest Molins, Regional Environmental Officer
HUD - San Francisco Regional Office

National Archive:

Federal Records Center - National Archives at San Francisco

State of California:

The Honorable Edmund G. Brown, Jr., Governor of California

Mr. Ken Alex
Governor's Office of Planning and Research

Mr. Brian Wines
San Francisco Bay Regional Water Quality Control Board

Ms. Sarah Richmond
San Francisco Bay Conservation & Development Commission

Mr. Scott Wilson, Regional Manager
California Department of Fish and Wildlife, Bay Delta Region

Mr. Matthew Rodriquez, Secretary for Environmental Protection
California Environmental Protection Agency (CalEPA)

Secretary John Laird
California Natural Resources Agency

Ms. Carole Roland-Nawi, California State Historic Preservation Officer
Office of Historic Preservation

Ms. Patricia Maurice, Acting District Branch Chief
California Department of Transportation, District 4

Mr. Cy R. Oggins, Chief- Division of Environmental Planning and Manager
California State Lands Commission

California State Parks

Ms. Gail McNulty
Native American Heritage Commission

Mr. Ryan Arba, Deputy Regional Administrator
California Governor's Office of Emergency Services

Ms. Tina Walker, Planning Division Chief
California Governor's Office of Emergency Services

Mr. Eric Hong, North Central Region Office Chief
CA Department of Water Resources, Integrated Regional Water Management

California Department of Public Health – Environmental Management Branch

California Department of Toxic Substances Control, Berkeley Regional Office

California Department of Conservation
Division of Land Resource Protection

Reinhard Flick, Oceanography, Division of Boating and Waterways
CA Department of Parks and Recreation

Local Governments:

Ms. Yves Zsutty, Trail Manager
City of San José – Parks, Recreation, and Neighborhood Services

Mr. Will Fourt, Park Planner III
County of Santa Clara – Parks and Recreation Department

Mr. Roy Molseed, Senior Environmental Planner
Santa Clara Valley Transportation Authority

Ms. Laura Thompson, Project Manager
Association of Bay Area Governments, San Francisco Bay Trail Project

Mr. John Stufflebean, Director – Environmental Services Department

Ms. Whitney Berry, Planner – Environmental Review
City of San José – Planning, Building and Code Enforcement

Supervisor Dave Cortese, Third District
County of Santa Clara, President - Board of Supervisors
County Government Center, East Wing

Mayor Sam T. Liccardo
City of San José

Councilmember Manh Nguyen
District 4 - City of San José

Mr. Adam Petersen, Senior Planner

Ms. Alison Kirk, Senior Environmental Planner
Bay Area Air Quality Management District, Planning and Research

Ms. Carolyn Walsh, Principal Planner
Santa Clara County Office of Planning and Development

Ms. Denise Bonilla, Vector Control District Manager
Santa Clara County Vector Control District

Historical Associations:

Spanish Town Historical society

Menlo Park Historical Association

San Mateo County Historical Association

Environmental Organizations:

Ms. Emily M. Renzel, Coordinator
Baylands Conservation Committee

Ms. Florence LaRiviere
Citizen's Committee to Complete the Refuge

Ms. Carin High
Citizen's Committee to Complete the Refuge

Ms. Eileen McLaughlin, Board Member
Citizen's Committee to Complete the Refuge

Shani Kleinhaus, Ph.D., Environmental Advocate
Santa Clara Valley Audubon Society

Ms. Sejal Choksi-Chugh, Program Director
San Francisco Baykeeper

Mr. Ian Wren

San Francisco Baykeeper

Mr. Paul R. Kumar, Political Director
Save The Bay

Ms. Alice Kaufman, Legislative Advocate
Committee for Green Foothills

Mr. Michael Ferreira, Executive Committee Member
Sierra Club, Loma Prieta Chapter

Cecilia D. Craig, Ph.D., BOD President
San Francisco Bay Wildlife Society

Other Interested Parties:

Ms. Diane Ross-Leech, Director, Environmental Policy-Safety, Health, and Environment
Pacific Gas and Electric Company

Mr. Pat Mapelli, Manager – Real Property
Cargill Salt

Mr. Kevin Yoder
Union Pacific Railroad

Mr. Hugo Hoffman
NASA Ames Research Center

CA Air National Guard
129th RQW Public Affairs

Newby Island Landfill

Mark Espinoza

Thomas Butler

Richard Santos

Libby Lucas

Mark Leddy

Brenda Buxton
CA State Coastal Conservancy
1330 Broadway, 13th Floor
Oakland CA 94612

SCVWD Winfield Warehouse
Attn: Rechelle Blank
5905 Winfield Blvd
San Jose, CA 95123

Public Libraries

San Jose Public Library
Calabazas Branch
1230 S Blaney Ave.
San José, CA 95129.

San Jose Public Library
Evergreen Branch
2635 Aborn Rd.
San José, CA 95121

San Jose Public Library
Hillview Branch
1600 Hopkins Dr.
San José, CA 95122

San Jose Public Library
Santa Teresa Branch
290 International Circle
San José, CA 95119

First Name	Last Name	Organization
Jae	Abel	Santa Clara Valley Water District
Jay	Ach	Port of San Francisco
Hank	Ackerman	Alameda County Public Works Agency
Josh	Ackerman	USGS
Zach	Adamis	
Seth	Adams	
Maria	Adas	Eden Shores Community
William	Ahern	
Christina	Ahlers	
Scott	Akin	Santa Clara Valley Water District
Joy	Albertson	FWS - Don Edwards SF Bay National Wildlife Refuge
Regina	Alcomendras	Santa Clara County Clerk-Recorder
Chris	Alderete	NASA
Nafisah	Ali	U.S. Department of the Interior, Office of Environmental Policy and Compliance
Roger	Allan	USACE
Jim R.	Allison	BART-Capitol Corridor Planning Group
Diane	Althoff	East Bay Regional Park District
Teresa	Alvarado	SCVWD-EAC
Ariel	Ambruster	
Sioux	Ammerman	
Paul	Anderson	Pacific Inter-Club Yacht Association
Daren	Anderson	City of Palo Alto, Community Service Dept.
Eric	Anderson	City of Mountain View
Laurel	Anderson	Santa Clara County
Shannah	Anderson	The Watershed Project
Rollie	Arbolante	Union Sanitary District
Gavin	Archbald	
Jon	Archer	Triton Marine Construction
Elaine	Archibald	Archibald & Wallberg Consultants
Emmy	Arcolino	Friends of Stevens Creek Trail
Louis	Armstrong	URS Corporation
Jim	Armstrong	
Tom	Armstrong	HMH Inc.
Deepa	Arora	Santa Clara University
Alisa	Arp	Romberg Tiburon Center
Rita	Artist	Port of Redwood City
Ruth	Askevold	SFEI
Kwablah	Attigobe	Alameda County Flood Control District
Craig	Aubrey	USFWS
Carrie	Austin	SF RWQCB
Erin	Austin	College of the Redwoods Honors Program
Mitch	Avalon	Contra Costa Flood Control District -Public Works Dept.
Debra	Ayers	UC Davis

James W.	Babcock, Ph.D.	Malcolm Pirnie, Inc.
Carol	Bach	Port of San Francisco
Thomas	Baily	URS Corporation
Ian	Bain	City of Redwood City
Greg	Baker	NOAA
Donna	Ball	Save The Bay
Grant	Ballard	
Robert	Bamford	
Patrick	Band	Save The Bay
Megha	Bansal	
Karen	Barr	Newscolor, LLC
Matthew	Barrows	Sacramento Bee
Debra	Bartons	Palo Alto Baylands Nature Center
Galli	Basson	SJSU
Bob	Batha	BCDC
Bob	Battalio	PWA
Lorenzo	Bavoso	CWA
Thomas	Bawden	USACE
Peter	Baye	
Andrew	Beahrs	
Gigi	Bealkowski	LifeScan, Inc.
Sarah	Beamish	Natural Heritage Institute
Josh	Bearman	VIMS
Robyn	Beavers	
Ginny	Becchine	Save Our South Bay Wetlands
Bern	Beecham	City of Palo Alto
Steve	Beissinger	UC Berkeley
Norton	Bell	FWS
Susan	Bell	Santa Clara Valley Audubon Society
Frank	Benest	City of Palo Alto
Ande	Bennett	BCDC
Charles	Benton	
Sue	Berg	EBMUD
Bruce	Bernard	
Rhonda	Berry	Our City Forest
Greg	Betts	City of Palo Alto, Open Space Preserve
Anne-Marie	Beveridge	
Stephen	Bianchi	Shaw Environmental, Inc.
Jill	Bicknell	Santa Clara Valley Urban Runoff PPP
Alan	Birnbaum	Fresno Audubon Society
Ned	Black	US EPA, Region 9
Henry	Blankenheim	
Maria	Blankenship	San Jose Public Library- Alviso Branch
Ron	Blatman	KTEH
Jon	Blegen	Solano County Mosquito Abatement District

Vivian	Blomenkamp	League of Women Voters
Steve	Blomquist	Santa Clara County, Office of Supervisor Dave Cortese
Valary	Bloom	FWS
Doug	Bloyd	
Joyce	Blueford	Math Science Nucleus
Jill	Bluso	USGS/Humboldt State
Phil	Bobel	City of Palo Alto, Public Works Dept.
Scott	Bodensteiner	Weston Solutions Inc
Jacqueline	Bogard	Guadalupe Coyote RCD
Stan	Bogosian	City of Saratoga
Rachel	Bonnefil	Acta Environmental
Nancy	Borgeson	Friends of Bayfront Park
Del	Borgsdorf	City of San Jose
Patrycja	Bossak	ABAG
Brian	Bothun	Palo Alto Daily News
John	Bourgeois	California State Coastal Conservancy
Scott	Bourne	
P	Boursier	HT Harvey & Associates
Bill	Bousman	
John	Bowers	
Mark	Bowers	City of Sunnyvale
Dale	Bowyer	SF RWQCB
Kathy	Boyer	Romberg Tiburon Center
Maziar	Bozorginia	City of East Palo Alto
Jeff	Bradley	WEST CONSULTANTS, INC.
John	Bradley	Citizens Committee to Complete the Refuge
Carie	Brandon	
Josh	Brandt	Urban Creeks Council
Andree	Breaux	SF RWQCB
Matt	Brennan	PWA
Tim	Brewer	
Laurie	Briden	DGF -Central Valley Bay-Delta Branch
Jerry A.	Bridges	Port of Oakland
Brielle	Brielle	Save Bayfront Park
Bill	Britt	Cargill Salt
Craig	Britton	Midpeninsula Regional Open Space District
Jack	Broadbent	Bay Area Air Quality Management District
John	Brosnan	Sonoma Land Trust
Betty	Brown	AWTF
Cindy	Brown	USGS
Kent	Brown	City of San Jose
Brian	Bruha	
Bill	Bruin	HAN-PADRON ASSOCIATES, LLP
Elizabeth	Brusati	UC Davis
Ronit	Bryant	League of Women Voters

Ginger	Bryant	Ginger Bryant & Associates
Kristine	Buccholz	PG&E
Gwen	Buchholz	CH2M Hill
Ann	Buell	Coastal Conservancy
Joanna	Bullock	ABAG
Jim	Burch	City of Palo Alto
Vibeke	Burchard	
David	Burke	Southern Illinois University in Carbondale
Mary	Burns	Santa Clara County Parks & Recreation Department
Fred	Burr	USACE -Sacramento District
Max	Busnardo	H.T. Harvey & Associates
Thomas	Butler	
Kevin	Butterbaugh	EDAW, Inc.
Brenda	Buxton	Coastal Conservancy
Kristin	Byrd	UC Berkeley/ESPM
Earl	Byron	CH2M Hill
Joanne	Cabling	SFEI
Kevin	Calcagno	Sequoia Analytical Laboratory
Debra	Caldon	Santa Clara Valley Water District
Elizabeth	Caldwell	Department of the Interior
Rick	Calender	Santa Clara Valley Water District
Brett	Calhoun	Santa Clara Valley Water District
Cesent	Calimpong	
John	Callaway	USF, Biology Department
Norma	Camacho	Santa Clara Valley Water District
Daniel	Campbell	
Jorine	Campopiano	US EPA
Nora	Campos	City of San Jose
DAVID	CANNON	EVEREST INTERNATIONAL CONSULTANTS, INC
Shelia	Canzian	City of San Mateo
David	Cardinal	Cardinal Photo
Len	Cardoza	Weston Solutions Inc
Jim	Carlton	Wall Street Journal
Edward	Carpenter	Romberg Tiburon Center
Kelly	Carrol	West Valley Clean Water Program
James	Carroll	Asian Week
Steve	Carroll	Ducks Unlimited
Anita	Carse	
Eric	Cartwright	Alameda County Water District
Michael	Casazza	USGS, Western Ecological Research Center
Ray	Casey	Santa Clara Valley Water District
Gonzalo	Castillo	FWS
Steven	Castleberry	San Francisco Bay Area Water Transit Authority
Martha	Ceja	Santa Clara Valley Water District
Dave	Ceppos	Center for Collaborative Policy

Joe	Cernac	Sierra Club
Winnie	Chan	FWS
Dylan	Chapple	Save The Bay
Mark	Charlton	USACE - SPD
Heather	Chase	National Fish and Wildlife Foundation
Larry	Cheeves	City of Union City
Joe	Chen	Santa Clara Valley Water District
Nelson	Chen	Menlo High School
Wendy	Chenkovich	Resources Law Group
John	Cherbone	City of Saratoga
David	Chesterman	Santa Clara Valley Water District
Ken	Chiang	S.S. Papadopulos & Associates
Lynn	Chiapella	
Roderick	Chisolm	USACE -SF District
Vincent	Chiu	
Steve	Cho	City of Fremont
Ann	Chrisney	Riparian Habitat Joint Venture
Elizabeth	Christian	SF RWQCB
Dean	Chu	City of Sunnyvale
Councilmember	Chu	City of San Jose
Mark	Church	San Mateo County Board of Supervisors
Richard	Cimino	
Carl	Claras	
Jim	Clegg	UC Davis
Jim	Cloern	USGS
Michael	Closson	Acterra
Robert	Coats	Hydroikos Associates
Janet	Cobb	California Wildlife Foundation
Frank	Codd	Alameda County Public Works Agency
Ellie	Cohen	Point Reyes Bird Observatory
Jackie	Cohen	
Risa	Cohen	UCLA
John	Coleman	EBMUD
John	Coleman	Bay Planning Coalition
Laurel	Collins	Watershed Sciences
Josh	Collins	SFEI
Robert	Cone	
Michelle	Conlon	Santa Clara Valley Water District
Karla	Conmy	
Caleb	Conn	USACE
Craig	Conner	USACE
Mike	Conner	SFEI
Mike	Connor	East Bay Dischargers Authority
David	Cook	

Patty	Cook	Jones & Stokes
Ann	Coombs	League of Women Voters
Rick	Cooper	San Francisco Planning Department
Elizabeth	Copper	Avian Research Associates
Doug	Cordell	San Francisco Bay National Wildlife Refuge
LaDoris	Cordell	City of Palo Alto
Evelyn	Cormier	CCCR/Ohlone Audubon
Doug	Corson	Lockheed Martin Space Systems Company
David D.	Cortese	City of San Jose
Christine	Corwin	
Natalie	Cosentino-Manning	NOAA Restoration Center
Steve	Costa	CH2M Hill
Mary	Cousins	UC Berkeley
Lisa	Cox	U.S. Fish & Wildlife Service
Mitchell	Craig	CSU Hayward
Lorna	Cranz	AWTF
Miles	Croom	NOAA -National Marine Fisheries Service
Dida	Cudrnak	U.S. Department of the Interior, Office of Environmental Policy and Compliance
Neil	Cullen	San Mateo County
Richard B.	Currie	Union Sanitary District
John	Curtis	Town of Los Gatos
Sara	Cutuli	
Carol	Cyr	
Dick	Dahllof	San Mateo County Transit District
Richard	Dale	Sonoma Ecology Center
Carole	d'Alessio	Friends of Corte Madera Creek Watershed
Stephanie	Dall	Dall & Associates
Dick	Daniel	CH2M Hill
Drew	Dara-Abrams	Foothill College
Audrey	Davenport	
Brian	David	
Margaret	Davidson	NOAA -National Ocean Service
Jay	Davis	SFEI
Karen	Davis	
Christopher	de Groot	City of Santa Clara
J.P	De la Montaigne	City of Mountain View
Edwin	Dean	
William	DeJager	U.S. Army Corps of Engineers
Scott	Demers	H.T. Harvey & Associates
Francesca	Demgen	URS Corporation
Ana C.	Demorest	CH2M Hill
Cynthia	Denny	Loma Prieta Chapter of the Sierra Club
Sarah	Deslauriers	Carollo Engineers

Gita	Dev	Sierra Club
Susan	DeVico	
Lou	Deziel	Menlo Park Planning Commission
Bill	Dietrich	UC Berkeley
Stephen	Dill	Leafybranch.org
Joe	Dillon	NOAA -National Marine Fisheries Service
Mike	Dimarco	Santa Clara Valley Water District
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		The Regional Water Quality Control Plant
		San Jose Public Library- Calabazas Branch
		San Jose Public Library- Evergreen Branch
		San Jose Public Library- Hillview Branch
		US EPA, Office of Clean Water Act Compliance
		NATIVE AMERICAN HERITAGE Commission
		San Jose Public Library- Santa Teresa Branch